PUBLIC REVIEW DRAFT • July 2011

Initial Study/Mitigated Negative Declaration

33-Unit Residential Common Interest Development

LEAD AGENCY:

City of Costa Mesa
77 Fair Drive
Costa Mesa, California 92626
Contact: Ms. Minoo Ashabi
714.754.5610

PREPARED BY:

RBF Consulting
14725 Alton Parkway
Irvine, California 92718
Contact: Mr. Richard Beck, CEP
Mr. Chris Johnson
949.472.3505

PUBLIC REVIEW DRAFT

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

2626 Harbor Boulevard

33-Unit Residential Common Interest Development

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July 15, 2011

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1.0 INTRODUCTION

The proposed 33-unit Residential Common Interest Development project involves the development of 33-unit single family detached homes on a 3.71-acre site located at the northeast corner of the Harbor Boulevard and Merrimac Way intersection in the City of Costa Mesa. The proposed residential development would be located on the former and now vacant Lincoln-Mercury auto dealership.

The proposed small-lot residential units would range in size from 2,002 square feet (sf) to 2,164 sf. On-street and off-street parking for the project would be located entirely within the proposed development. One full access entry to the project would be provided off Merrimac Way.

Following preliminary review of the proposed project, the City of Costa Mesa determined that it is subject to the guidelines and regulations of the California Environmental Quality Act (CEQA). This Initial Study addresses the direct, indirect, and cumulative environmental effects associated with the project, as proposed.

1.1 STATUTORY AUTHORITY AND REQUIREMENTS

In accordance with CEQA (Public Resources Code Sections 21000-21177) and pursuant to Section 15063 of Title 14 of the California Code of Regulations (CCR), the City of Costa Mesa, acting in the capacity of Lead Agency, is required to undertake the preparation of an Initial Study to determine whether the proposed project would have a significant environmental impact. If the Lead Agency finds that there is no evidence that the project, either as proposed or as modified to include the mitigation measures identified in the Initial Study, may cause a significant effect on the environment, the Lead Agency shall find that the proposed project would not have a significant effect on the environment and shall prepare a Negative Declaration (or Mitigated Negative Declaration) for that project. Such determination can be made only if "there is no substantial evidence in light of the whole record before the Lead Agency" that such impacts may occur (Section 21080(c), Public Resources Code).

The environmental documentation, which is ultimately approved and/or certified by the City of Costa Mesa in accordance with CEQA, is intended as an informational document undertaken to provide an environmental basis for subsequent discretionary actions upon the project. The resulting documentation is not, however, a policy document, and its approval and/or certification neither presupposes nor mandates any actions on the part of those agencies from whom permits and other discretionary approvals would be required.

1.2 PURPOSE

Section 15063 of the *CEQA Guidelines* identifies specific disclosure requirements for inclusion in an Initial Study. Pursuant to those requirements, an Initial Study shall include:

- A description of the project, including the location of the project;

- Identification of the environmental setting;
- Identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries;
- Discussion of ways to mitigate significant effects identified, if any;
- Examination of whether the project is compatible with existing zoning, plans, and other applicable land use controls; and
- The name(s) of the person(s) who prepared or participated in the preparation of the Initial Study.

1.3 INCORPORATION BY REFERENCE

The references outlined below were utilized during preparation of this Initial Study. The documents are available for review at the City of Costa Mesa Planning and Building Agency, located at 77 Fair Drive, Costa Mesa, California 92628.

- *City of Costa Mesa General Plan* (Adopted January 22, 2002). The purpose of the General Plan is to provide a general, comprehensive, and long-range guide for community decision-making. The City of Costa Mesa General Plan consists of the following elements, adopted on various dates: Land Use, Circulation, Housing, Conservation, Noise, Safety, Open Space and Recreation, Growth Management, Community Design, and Historic and Cultural Resources. The individual elements identify goals and policies for existing and future conditions within the City of Costa Mesa.

- *City of Costa Mesa 2000 General Plan EIR* (Adopted January 22, 2002). Each element has undergone its own environmental review to identify the potential environmental impacts associated with adoption of the specific General Plan element. The purpose of the environmental analysis is to analyze the potential impacts from buildout of the City's General Plan, including the provision of roadways, infrastructure, and development of urban uses.

- *City of Costa Mesa Municipal Code (CMMC) (Codified through Ordinance No. 11-3, enacted March 1, 2011. (Supp. No. 120, 3-11)*. The CMMC consists of regulatory, penal, and administrative ordinances of the City of Costa Mesa. It is the method the City uses to implement control of land uses, in accordance with *General Plan* goals and policies. Title 13 (Chapter II, *Zoning Districts Established)* of the CMMC identifies land uses permitted and prohibited according to the zoning designation of particular parcels.

2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND SETTING

PROJECT LOCATION

The 3.71-acre project site is located within the City of Costa Mesa (City), south of the San Diego Freeway (I-405) and west of the Costa Mesa Freeway (SR-55), within Orange County, California; refer to Exhibit 2-1, *Regional Vicinity*. The project site is located at 2626 Harbor Boulevard, at the northeast corner of the intersection of Harbor Boulevard and Merrimac Way; refer to Exhibit 2-2, *Local Vicinity*.

EXISTING CONDITIONS

Several car dealerships (occupied and vacant) are located along Harbor Boulevard. The project site contains vacant structures associated with a former Lincoln Mercury car dealership. The vacant car dealership and associated buildings were developed in the 1960s. The property has remained a car dealership until its closing in January 2011. Since its closing, the dealership has been undergoing transition and operating in a reduced capacity. The dealership's focus of activities since closure have involved the removal and auctioning of car repair equipment as well as the relocation of general office equipment, supplies, and vehicle inventory.

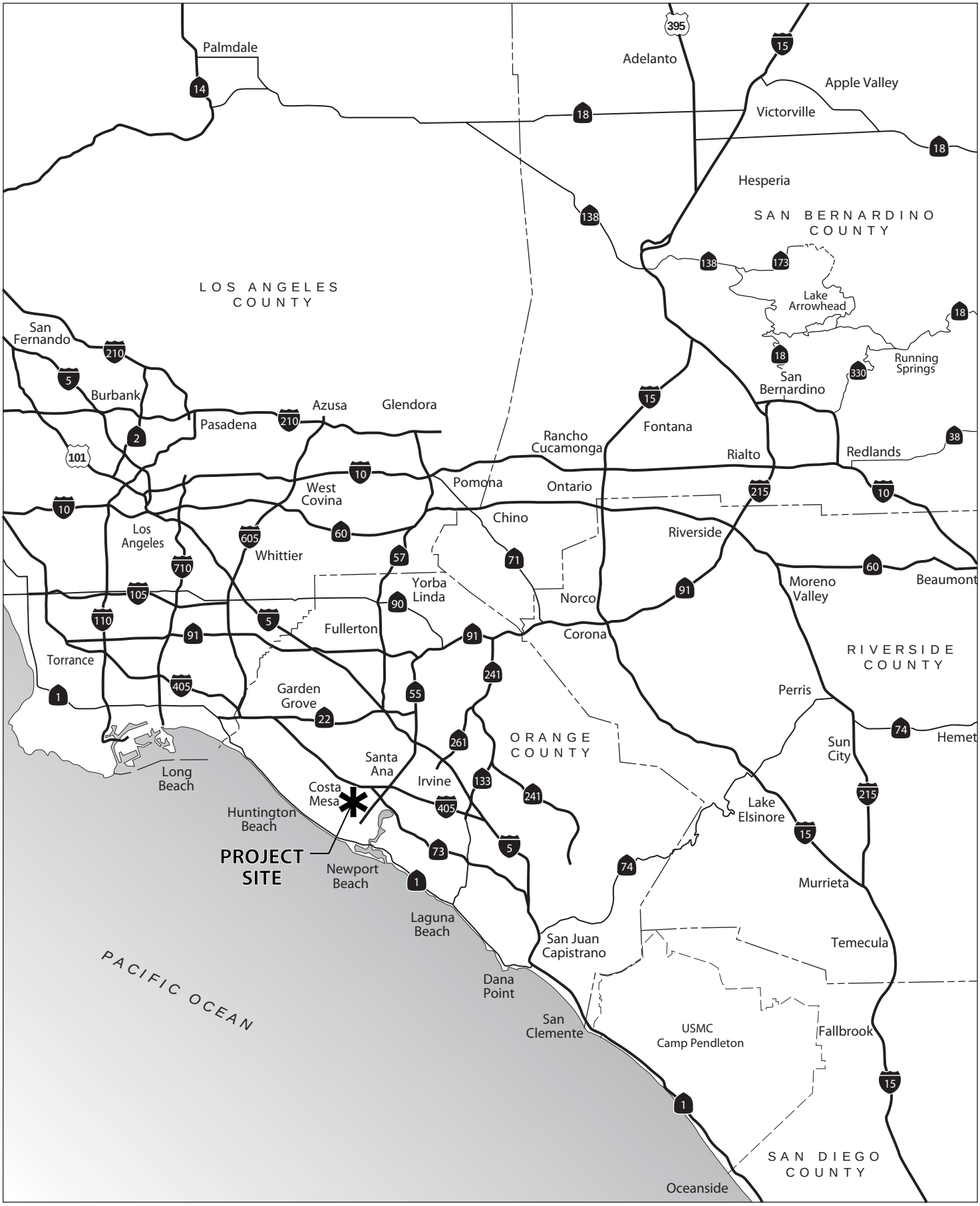
The site is comprised entirely of impervious surfaces primarily as a result of the car dealership parking lot. Two vacant structures are located on-site. The structures were utilized for office, sales, and repair services. The remainder of the site includes areas for employee, customer, and new car parking. The property is largely void of vegetation, except for a few ornamental trees along Harbor Boulevard and along the project site's western boundary; refer to Exhibit 2-3, *On-Site Photographs*. Existing building permits for the project site include:

- Auto maintenance building (paint and detail shop) – 3,744 square feet (sf)
- Auto show room – 11, 026 sf
- Used car building – 358 sf
- Auto service building – 2,938 sf
- Auto service building – 10,968 sf

SURROUNDING LAND USES

Surrounding Uses to the North:

Commercial uses (Southern California Auto House and ACE Hardware) and a two-story multi-family housing development are located along the project site's northern boundary. Car ports and associated parking for these uses immediately abut the project site and are separated from the project site by metal fencing and block walls; refer to Exhibit 2-4, *Off-Site Photographs*.



RBF CONSULTING

0 5 11 miles
APPROXIMATE

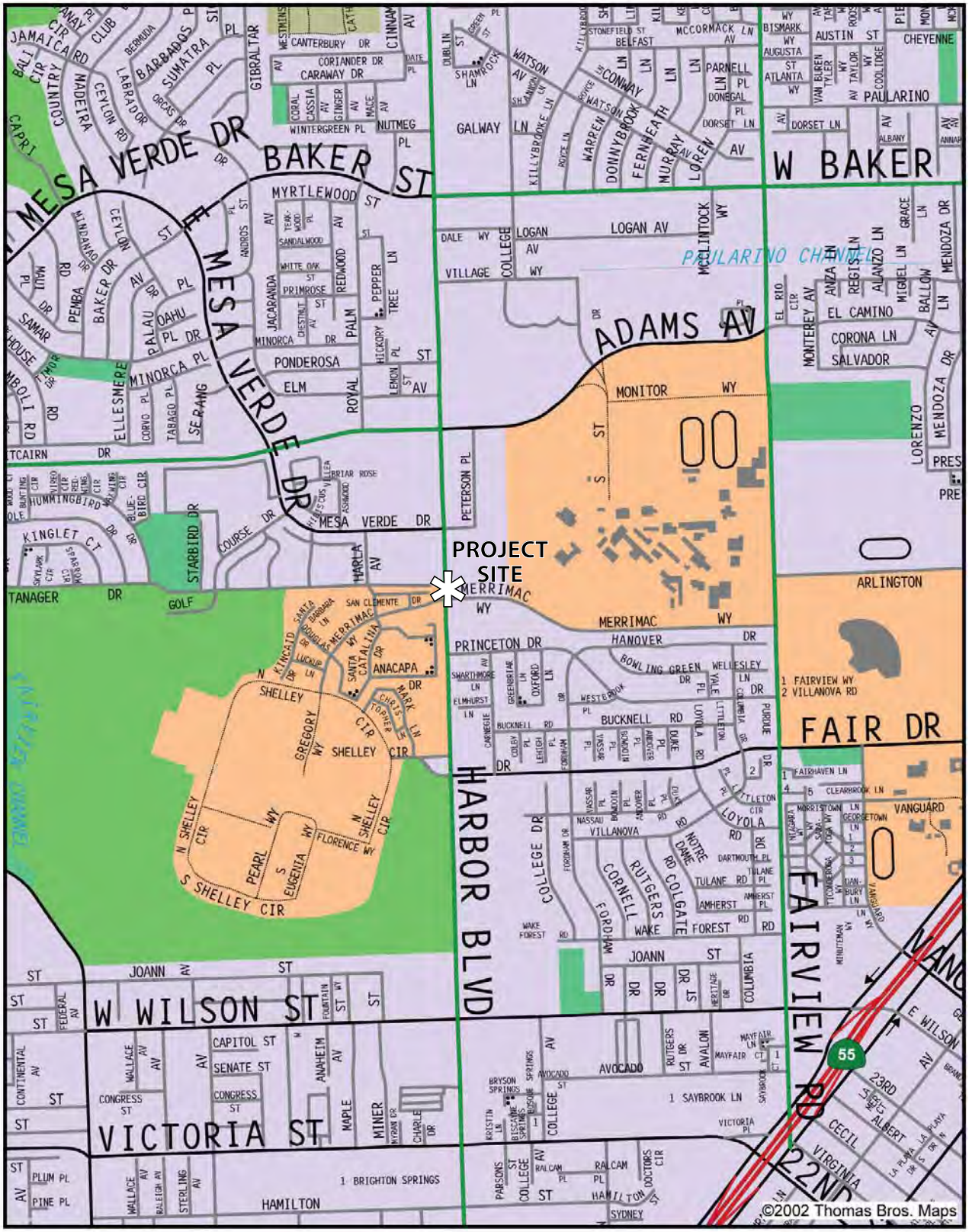
6/08/11 JN 10-108150

PROJECT SITE

2626 HARBOR BOULEVARD
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Regional Vicinity

Exhibit 2-1



Source: Thomas Brothers Maps, 2002.

NOT TO SCALE

PROJECT SITE

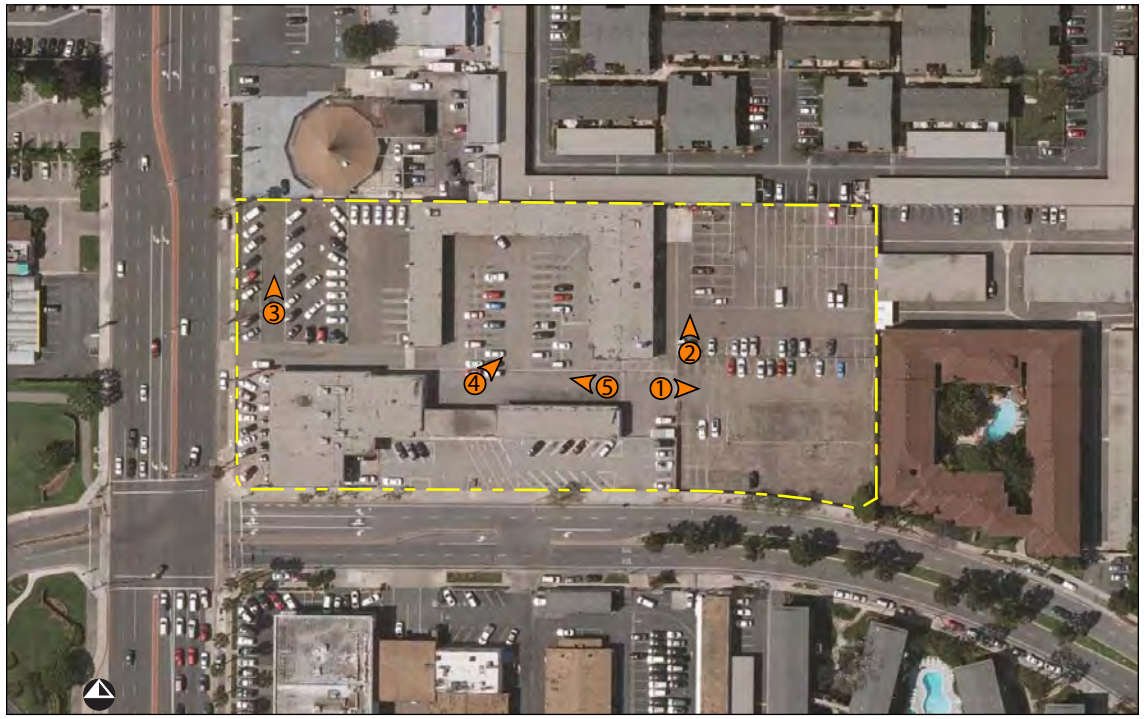
RBF CONSULTING

6/08/11 JN 10-108150

2626 HARBOR BOULEVARD
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Local Vicinity

Exhibit 2-2



3 View looking north across the project site.

4 View looking northeast across the project site.

1 View looking east across the project site.

2 View looking north across the project site.

5 View looking west across the project site.

Orientation

Photograph Number

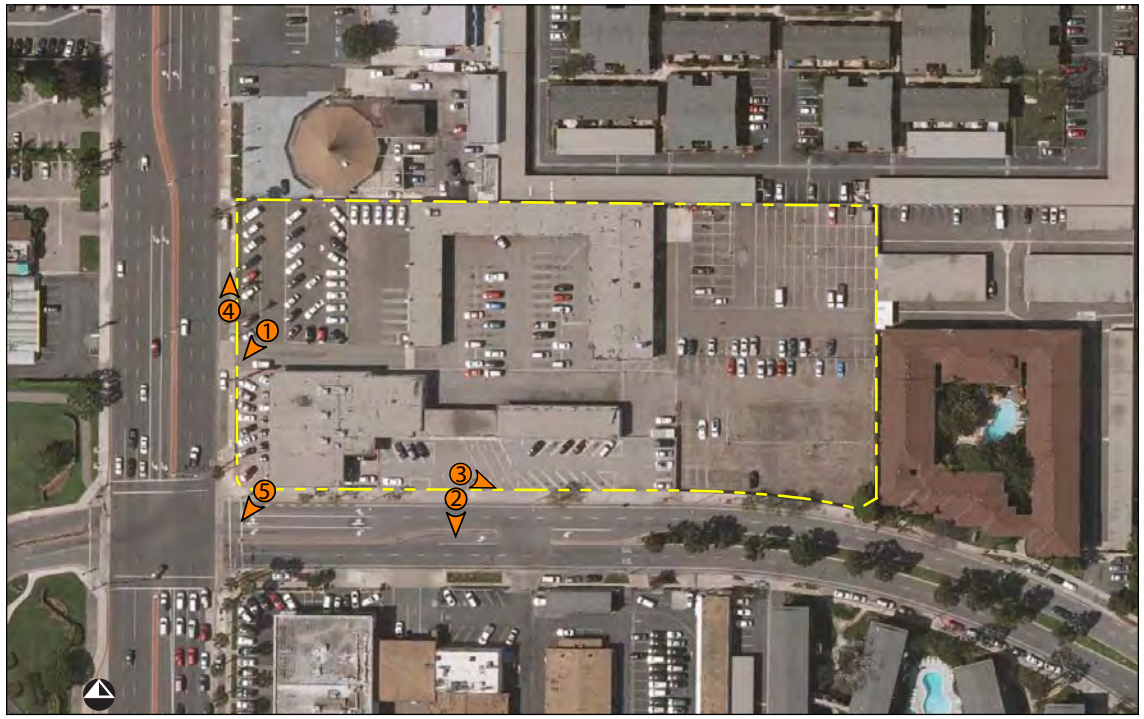
RBF CONSULTING

6/08/11 JN 10-108150

2626 HARBOR BOULEVARD
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

On-Site Photographs

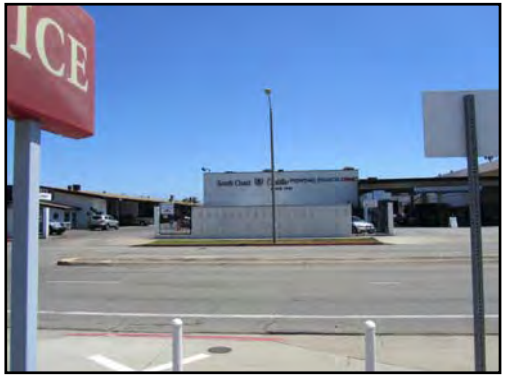
Exhibit 2-3



3 View looking southeast across the project site.

4 View looking north across the project site.

1 View looking southwest across the project site.



2 View looking south across the project site.

5 View looking southwest across the project site.

Orientation

Photograph Number

RBF CONSULTING

6/08/11 JN 10-108150

2626 HARBOR BOULEVARD
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Off-Site Photographs

Exhibit 2-4

Surrounding Uses to the East:

To the east of the project site is the three-story Casa Granada multi-family residential use. The residential units and associated surface parking, including carports, immediately abut the project site.

Surrounding Uses to the South:

Merrimac Way borders the project site immediately to the south. South of Merrimac Way is an auto dealership (South Coast Cadillac) with associated mechanics facilities and surface parking. The Sunset Cove multi-family residential development and associated surface parking is located to the south of Merrimac Way.

Surrounding Uses to the West:

Harbor Boulevard is situated adjacent to the project site to the west. Uses west of Harbor Boulevard include the Harbor Valley Apartments as well as commercial uses, including Sprint, a pub, and the Super 8 Motel.

EXISTING ZONING AND GENERAL PLAN

The General Plan Land Use Map (July 2004) designates the project site as General Commercial. The General Commercial designation is intended to permit a wide range of commercial uses which service both local and regional needs. This designation allows for uses such as, but not limited to, junior department stores and retail clothing stores, theaters, restaurants, automotive sales, and service establishments. The project site is zoned *C1 (Local Business District)* which is intended to meet the local business needs of the community by providing a wide range of goods and services in a variety of locations throughout the City. The permitted and conditional uses as well as development standards are aimed toward reducing impacts on surrounding properties, especially in those areas where residential uses are in the vicinity. The project is also zoned *P (Off-Street Parking District),* which is intended to allow parking lots, and buildings incidental to the operation of a parking lot.

2.2 PROPOSED PROJECT

The 33-unit Residential Common Interest Development project would subdivide four vacant parcels, comprising the former Lincoln Mercury auto dealership, into thirty-three (33) residential lots, one (1) private street, and seven (7) open space lots on approximately 3.71 acres. The proposal includes a new storm drain to serve the project site within Merrimac Way and minor road improvements along Merrimac Way, including the removal of portions of the existing median and a striped continuous two-way left turn lane to provide access to the project. Please refer to Exhibit 2.5-1, *Conceptual Site Plan*, and Exhibit 2.5-2, *Tract Map No. 17423*.

General Plan Amendment GP-11-01

The proposed project would require an amendment to the City's General Plan in order to change the existing land use designation from General Commercial to Medium-Density Residential.

Source: KPI Inc. Architecture & Planning and RBF Consulting

RBF CONSULTING

0 40 80 Feet

6/08/11 JN 10-108150

2626 HARBOR BOULEVARD
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Conceptual Site Plan

Exhibit 2.5-1

Back of 11 x 17 Exhibit – Page Left Blank

LEGAL DESCRIPTION

PARCEL 1 OF PARCEL MAP RECORDED IN BOOK 20, PAGE 49 OF PARCEL MAPS IN THE OFFICE OF THE COUNTY RECORDER, COUNTY OF ORANGE, STATE OF CALIFORNIA.

UTILITY COMPANIES/CONTACTS

TELEPHONE	PACIFIC BELL	(800) 310-2155
ELECTRIC	SOUTHERN CALIFORNIA EDISON CO	(800) 684-8123
GAS	SOUTHERN CALIFORNIA GAS CO	(800) 427-2100
CABLE T.V.	AT&T	(949) 764-0018
SEWER & TRASH	COSTA MESA SANITARY DISTRICT	(949) 645-8400
WATER	MESA CONSOLIDATED WATER	(949) 631-1200

NOTES

1. SITE ADDRESS: 2626 Harbor Boulevard, Costa Mesa, CA
2. ASSESSORS PARCEL: 141-731-02, 03 141-361-29, 30
3. THOMAS GUIDE: Pg. 858 Grid J7
4. SITE AREA: NET: 3.71 Acres GROSS: 4.73 Acres (to CL ot Adjacent Streets)
5. LOTS: 1 EXISTING
   33 PROPOSED RESIDENTIAL (2.46 Ac.)
   7 COMMON OPEN SPACE (0.27 Ac.)
   1 PRIVATE STREET (0.98 Ac.)
6. EXISTING ZONING: C-1 (Local Business) and P (Off-street Parking)
7. FLOOD ZONE: X (Unshaded) per FIRM 06059C0226J.
8. THE UTILITIES SHOWN ON THIS MAP ARE BASED UPON THE BEST AVAILABLE PUBLIC INFORMATION OBTAINED FROM THE CITY OF COSTA MESA.
9. ALL STREETS AND DRIVES ARE TO BE DEDICATED AS EASEMENT FOR WATER, SANITARY SEWER, STORM DRAIN, AND PUBLIC UTILITY PURPOSES.
10. ALL EXISTING STRUCTURES ON SITE SHALL BE REMOVED.
11. PROPOSED LAND USE: SINGLE-FAMILY RESIDENCES.

SITE DATA SUMMARY

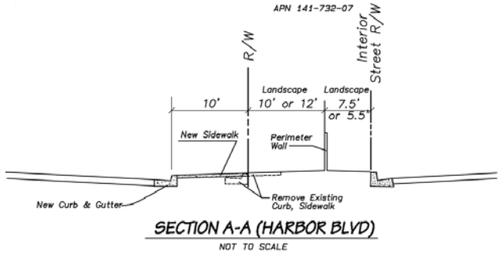
NO. OF LOTS:	41 (33 RESIDENTIAL, 1 PRIVATE STREET, 7 OPEN SPACE LOTS)		
GROSS ACREAGE:	3.71 AC.		
DENSITY:	8.89 D.U. / ACRE		
PARKING:	GARAGE	66	2 PER UNIT
	DRIVEWAYS	66	2 PER UNIT
	STREET	18	
	TOTAL	150	(4.55 SPACES PER UNIT)

SYMBOLS LEGEND

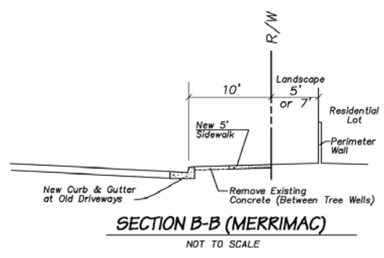
- TOP/TOE OF SLOPE
- PROJECT BOUNDARY
- RIGHT OF WAY
- LOT LINE
- CENTERLINE
- STORM DRAIN LINE
- W — WATER LINE
- S — SEWER LINE
- RETAINING WALL
- CONCRETE SIDEWALK
- CB — CATCH BASIN
- 4 — LOT NUMBER
- 69.0 — PAD ELEVATION
- 4821 SF — LOT AREA
- ON-STREET PARKING SPACE

PRELIMINARY EARTHWORK QUANTITY ESTIMATE

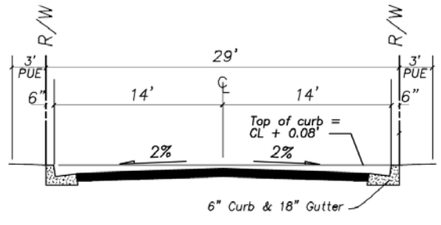
DESCRIPTION	CUT	FILL
RAW	1900 CY	4000 CY
IMPORT	2100 CY	
TOTAL	4000 CY	4000 CY



SECTION A-A (HARBOR BLVD)
NOT TO SCALE

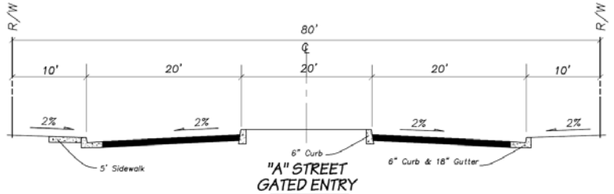


SECTION B-B (MERRIMAC)
NOT TO SCALE



"B" STREET
NOT TO SCALE

TYPICAL STREET SECTIONS-
PRIVATE INTERIOR STREETS



"A" STREET
GATED ENTRY
NOT TO SCALE

LOT DATA

LOT NO.	AREA	WIDTH	PURPOSE
1	3383 SF	67'	RESIDENTIAL
2	3214 SF	62'	RESIDENTIAL
3	3440 SF	62'	RESIDENTIAL
4	4658 SF	79'	RESIDENTIAL
5	3210 SF	62'	RESIDENTIAL
6	3220 SF	62'	RESIDENTIAL
7	4110 SF	71'	RESIDENTIAL
8	3200 SF	62'	RESIDENTIAL
9	3193 SF	62'	RESIDENTIAL
10	3193 SF	62'	RESIDENTIAL
11	3296 SF	64'	RESIDENTIAL
12	3296 SF	64'	RESIDENTIAL
13	3193 SF	62'	RESIDENTIAL
14	3193 SF	62'	RESIDENTIAL
15	3802 SF	69'	RESIDENTIAL
16	3189 SF	64'	RESIDENTIAL
17	3100 SF	62'	RESIDENTIAL
18	3100 SF	62'	RESIDENTIAL
19	3200 SF	64'	RESIDENTIAL
20	3200 SF	64'	RESIDENTIAL
21	3100 SF	62'	RESIDENTIAL
22	3464 SF	70'	RESIDENTIAL
23	3534 SF	70'	RESIDENTIAL
24	3162 SF	62'	RESIDENTIAL
25	3264 SF	64'	RESIDENTIAL
26	3264 SF	64'	RESIDENTIAL
27	3162 SF	62'	RESIDENTIAL
28	3162 SF	62'	RESIDENTIAL
29	3242 SF	64'	RESIDENTIAL
30	3548 SF	70'	RESIDENTIAL
31	3299 SF	63'	RESIDENTIAL
32	3169 SF	62'	RESIDENTIAL
33	3231 SF	64'	RESIDENTIAL
A (OS)	2095 SF	N/A	OPEN SPACE
B (OS)	4819 SF	N/A	OPEN SPACE
C (OS)	1519 SF	N/A	OPEN SPACE
D (OS)	423 SF	N/A	OPEN SPACE
E (OS)	1221 SF	N/A	OPEN SPACE
F (OS)	1414 SF	N/A	OPEN SPACE
G (OS)	436 SF	N/A	OPEN SPACE
SUBTOTAL	121918 SF		
H (PVT ST)	39388 SF	N/A	PRIVATE STREET
Corner ROW	179 SF	N/A	PUBLIC STREET
TOTAL	161306 SF		

MIN. LOT AREA= 3100 SF
MAX. LOT AREA= 4658 SF
AVG. LOT AREA= 3694 SF

*AVG. LOT AREA= TOTAL LOTS +TOTAL OPEN SPACE / 33 LOTS

RBF CONSULTING

0 30 60 Feet

6/08/11 JN 10-108150 Source: RBF Consulting

2626 HARBOR BOULEVARD
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Tract Map No. 17423

Exhibit 2.5-2

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Rezone R-11-01

The proposed project would also require a change for the existing zoning designation of C1 (Local Business) and P (Off-Street Parking) to R2-MD (Multiple Family Residential). The R2-MD zoning district allows a maximum of twelve (12) dwelling units per acre.

Planning Application PA-11-01 for the Design Review

The following architectural design features will be reviewed as part of the City's design review process:

Tentative Tract Map No 17428

The proposed project requires a Tentative Tract Map (TTM). TTMs are reviewed to ensure that development complies with the State Subdivision Map Act, City Subdivision Regulations, environmental, zoning, and building regulations, the General Plan, and requirements of the Public Works, Fire, and Police Departments. TTM No. 17428 consists of 41 lots (33 residential, 1 private street and 7 open space lots) on 3.71-acres of land. The density is 8.89 dwelling units per acre. The TTM includes 150 parking spaces (4.55 per unit). Garage, driveway, and street parking are identified.

Residential Design

The proposed residential lots range from 3,018 sf to 4,621 sf and provide three product options: Plan 1 would consist of approximately 2,056 sf, including 3 bedrooms, a loft, and 2.5 baths. As an alternative, Plan 1 could have 4 bedrooms. Plan 2 would consist of approximately 2,151 sf, including 4 bedrooms and 3.5 baths. As an alternative, Plan 2 could have 5 bedrooms. Architectural styles would consist of Spanish Colonial and Craftsman design and treatments. The proposed project includes eight (8) Plan 1 products, eight (8) Plan 1 Alternative products, and seventeen (17) Plan 2 products. Each lot would have approximately 1,500 sf of private open space.

The proposed structures would be designed to incorporate related architectural elements, facade articulation, and massing variation. Craftsman stylistic elements would likely include low-pitched, gabled roofs with wide unenclosed eave overhangs, exposed roof rafters, decorative (false) beams or braces under gables, thick solid masonry walls of adobe brick or rubble stone (usually covered with protective stucco), and porches that are typically supported by tapered square columns or pedestals extending to the ground level. Materials would consist of stucco with stone and wood treatments. Spanish Colonial stylistic elements would include bars or grilles of wood or wrought iron covering exterior openings and wooden shutters.

Building Height

Both residential plans 1 and 2 would have a maximum building height of 25 feet.

Access and Parking

The proposed project would be a private neighborhood with a sliding gate and call box entry. A full access entry to the development would include an ingress and egress along Merrimac Way. All plans include a two-car garage and driveway for two additional

parking spaces totaling 132 spaces (i.e., 66 garage spaces and 66 parking spaces on private driveways). Eighteen (18) additional on-street parallel parking spaces would be available along the private in-tract street. The proposed project provides 4.55 spaces per unit; refer to Exhibit 2.5-1, *Conceptual Site Plan.*

Pedestrian access would be provided via a public sidewalk located along the project site's southern frontage along Merrimac Way.

Landscaping

The project proposes to construct approximately 11,929 square feet of landscaping and irrigation improvements (7% of the total site area) within seven separate lots. Both common areas and individual lots would be landscaped. Landscaping would occur along perimeter walls and at the ingress/egress. Potential trees included in the plant palette include gold medallion, brisbane box, jacaranda, and southern magnolia. The lots are located adjacent to Harbor Boulevard and Merrimac Way and within the development, and would be maintained by a Homeowners Association (HOA). All landscape improvements would be constructed within these designated lots with the exception of Merrimac Way. The existing Merrimac Way median would be modified to accommodate left-hand turning movements. All landscape and irrigation systems would be designed and maintained in accordance with City of Costa Mesa requirements and comply with the State of California's Model Water Efficient Landscape Ordinance, AB 1881. Detailed landscape and irrigation plans would be submitted to the City for review and approval prior to obtaining building permits. Exhibit 2.6, *Preliminary Landscape Plan,* illustrates on-site vegetated areas.

PROJECT PHASING AND CONSTRUCTION

Demolition of existing structures and construction activities would occur starting in February 2012 and continue through September 2013. Demolition materials would be hauled off-site to a permitted landfill. The site grading requires approximately 1,900 cubic yards of cut and 4,000 cubic yards of fill, of which 2,100 cubic yards would be imported. The import location would be within 20 miles of the project site. All new infrastructure would be completed during the first phase of construction. The project is anticipated to be completed in three phases (per applicant).

Site Preparation, Demolition, Grading and Construction

Preparation of the site for the project would require parking lot and existing structures to be demolished and graded, and construction of the infrastructure and residential units. Standard construction equipment would include:

- **Demolition**: Concrete and Industrial Saws, Excavator, and Rubber Tire Dozers.
- **Grading**: Grader, Rubber Tire Dozer, Tractor, Loader/Backhoe, Excavator, Scapers, and a Water Truck.
- **Building Equipment**: Crane, Forklifts, Tractor/Loader/Backhoe/Welders, Generator Set.
- **Paving**: Pavers, Paver Equipment and Rollers.

PLANTING PALLETTE

IT IS ANTICIPATED THAT THE FINAL LANDSCAPE DESIGN WILL INCLUDE A COMBINATION OF NATIVE AND DROUGHT TOLERANT PLANTS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

HARBOR BOULEVARD AND MERRIMAC WAY INTERSECTION

STREET TREE, SUCH AS:
CASSIA LEPTOPHYLLA - GOLD MEDALLION TREE
24" BOX SIZE MINIMUM AT SPACING SHOWN ON PLAN

BACK GROUND SHRUB, SUCH AS:
LIGUSTRUM JAPONICUM TEXANUM - JAPANESE PRIVET
STRELITZIA REGINAE - BIRD OF PARADISE
5 GALLON SIZE @ 36" ON CENTER

GROUND COVER, SUCH AS:
TRACHELOSPERMUM JASMINOIDES - STAR JASMINE
1 GALLON @ 24" ON CENTER

WALL VINES; SUCH AS
DISTICTIS BUCCINATORIA - BLOOD RED TRUMPET VINE

HARBOR BOULEVARD

STREET TREES, SUCH AS:
LOPHOSTEMON CONFERTUS - BRISBANE BOX
24" BOX SIZE MINIMUM AT SPACING SHOWN ON PLAN

BACKGROUNE SHRUBS, SUCH AS:
LIGUSTRUM JAPONICUM TEXANUM - JAPANESE PRIVET
5 GALLON SIZE @ 36" ON CENTER

GROUND COVER, SUCH AS:
TRACHELOSPERMUM JASMINOIDES - STAR JASMINE
1 GALLON @ 24" ON CENTER

WALL CLINGING VINES; SUCH AS
DISTICTIS BUCCINATORIA - BLOOD RED TRUMPET VINE
5 GALLON SIZE AT 10' ON CENTER

MERRIMAC WAY

STREET TREES, SUCH AS:
JACARANDA MIMOSIFOLIA - JACARANDA
24" BOX SIZE MINIMUM AT SPACING SHOWN ON PLAN

BACKGROUND SHRUBS, SUCH AS:
LIGUSTRUM JAPONICUM TEXANUM - JAPANESE PRIVET
5 GALLON SIZE @ 36" ON CENTER

GROUND COVER, SUCH AS:
TRACHELOSPERMUM JASMINOIDES - STAR JASMINE
1 GALLON @ 24" ON CENTER

WALL CLINGING VINES, SUCH AS
DISTICTIS BUCCINATORIA - BLOOD-RED TRUMPET VINE
5 GALLON SIZE AT 10' ON CENTER

PROJECT ENTRY

STREET TREES, SUCH AS:
CASSIA LEPTOPHYLLA - GOLD MEDALLION TREE (MEDIAN)
MAGNOLIA GRANDIFLORA 'LITTLE GEM' - SOUTHERN MAGNOLIA (PARKWAY) 24" BOX SIZE MINIMUM AT SPACING SHOWN ON PLAN

BACKGROUND SHRUBS, SUCH AS:
JATROPHIA INTEGERRIMA - SPICY JATROPHIA
LIGUSTRUM JAPONICUM TEXANUM - JAPANESE PRIVET
STRELITZIA REGINAE - BIRD OF PARADISE
5 GALLON SIZE @ 36" ON CENTER

ACCENT SHRUB, SUCH AS:
HEMEROCALLIS SPP. - HYBRID DAY LILY
1 GALLON @ 18" ON CENTER

GROUND COVER, SUCH AS:
TRACHELOSPERMUM JASMINOIDES - STAR JASMINE
1 GALLON @ 24" ON CENTER

WALL CLINGING VINES, SUCH AS
BEAUMONTIA GRANDIFLORA - EASTER LILY VINE
PETRIA VOLUBULIS - QUEENS WREATH
5 GALLON SIZE AT 10' ON CENTER

INTERNAL PROJECT STREETS

STREET TREES, SUCH AS:
MAGNOLIA GRANDIFLORA 'LITTLE GEM' - SOUTHERN MAGNOLIA
24" BOX SIZE MINIMUM AT SPACING SHOWN ON PLAN

BACKGROUND SHRUBS, SUCH AS:
LIGUSTRUM JAPONICUM TEXANUM - JAPANESE PRIVET
5 GALLON SIZE @ 36" ON CENTER

GROUND COVER, SUCH AS:
TRACHELOSPERMUM JASMINOIDES - STAR JASMINE
1 GALLON @ 24" ON CENTER

WALL CLINGING VINES, SUCH AS
DISTICTIS 'RIVERS' - ROYAL TRUMPET VINE
5 GALLON SIZE AT 10' ON CENTER

GENERAL NOTES

1. DESIGN STANDARDS: ALL LANDSCAPING AND IRRIGATION SYSTEMS SHALL BE DESIGNED, CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF COSTA MESA, INCLUDING BUT NOT LIMITED TO THE CITY OF COSTA MESA ZONING CODE, TITLE 13, CHAPTER VII, LANDSCAPING STANDARDS, CITY STREETSCAPE AND MEDIAN DESIGN STANDARDS, CITY'S RECOMMENDED PRIVATE PROPERTY TREE PALLETTE, AND THE CITY OF COSTA MESA WATER EFFICIENT LANDSCAPE GUIDELINES - JANUARY 2010.

2. MAINTENANCE: ALL LANDSCAPING DEPICTED HEREIN SHALL BE MAINTAINED BY A HOME OWNERS ASSOCIATION.

3. SCREENING OF ABOVE GRADE UTILITIES: ALL ABOVE GRADE UTILITIES LOCATED WITH A LANDSCAPE AREA SHALL BE SCREENED FROM PUBLIC VIEW TO THE GREATEST EXTENT POSSIBLE.

4. GRAFFITI: ALL EXPOSED SURFACES OF PERIMETER WALLS AND FENCES SHALL BE PLANTED WITH VINES AND SHRUBS TO PREVENT GRAFFITI. VINES AND SHRUBS SHALL BE PLANTED FROM 5 GALLON CONTAINER SIZE OR LARGER.

5. TREES: ONE TREE SHALL BE PROVIDED FOR EVERY 200 SQUARE FEET(SF) OF LANDSCAPE AREA. 50% SHALL BE EVERGREEN AND 25% SHALL BE 24" BOX SIZE OR LARGER. TREES SHALL BE MIXIMUM 8' IN HEIGHT AND 3" IN CALLIPER. TREES SHALL BE SELECTED FROM THE CITY'S RECOMMENDED PRIVATE PROPERTY TREE PALLETTE OR AS APPROVED BY THE CITY PUBLIC SERVICES DEPARTMENT. ALL TREES TO BE INSTALLED AND STAKED IN ACCORDANCE WITH CITY STANDARDS CONTAINED IN THE STREETSCAPE AND MEDIAN DEVELOPMENT STANDARDS.

TOTAL SITE AREA: 161,305

TOTAL LANDSCAPE AREA: 11,929 SF (7% OF PROJECT SITE)

TOTAL TREES REQUIRED (1 PER 200 SF): 60 (40 SHOWN ON PLAN)

TOTAL 24" BOX TREES OR LARGER REQUIRED (25% OF TOTAL TREES): 15 (40 SHOWN ON PLAN)

TOTAL 15 GALLON TREES REQUIRED: 45 (0 SHOWN ON PLAN)

6. PUBLIC SERVICES DEPARTMENT: ALL TREES LOCATED WITHIN THE PUBLIC RIGHT OF WAY SHALL BE APPROVED BY THE PUBLIC SERVICES DEPARTMENT.

7. TREE ROOT BARRIER: ALL TREES LOCATED WITHIN 8' OF A PAVED SURFACE WILL BE INSTALLED WITH AN APPROVED TREE ROOT BARRIER.

8. SHRUBS: ONE SHRUB SHALL BE PROVIDED FOR EVERY 25 SF OF LANDSCAPE AREA. 60% OF SHRUBS SHALL BE 5 GALLON CONTAINER SIZE OR LARGER.

TOTAL LANDSCAPE AREA: 11,929 SF

TOTAL SHRUBS REQUIRED (1 PER 25 SF): 478

TOTAL 5 GALLON SHRUBS REQUIRED (60% OF TOTAL SHRUBS): 287

TOTAL 1 GALLON SHRUBS: 191

9. GROUNDCOVER: 70% OF LANDSCAPE AREA SHALL INCLUDE GROUND COVER. THE REMAINING AREA SHALL INCLUDE A 2" LAYER OF MULCH. A 2 FOOT DIAMETER ZONE CLEAR OF MULCH AND GROUNDCOVER SHALL BE MAINTAINED AROUND ALL TREES.

TOTAL LANDSCAPE AREA: 11,929 SF

TOTAL GROUND COVER AREA REQUIRED (70%): 8,351

TOTAL MULCH AREA: 3,578

10. IRRIGATION: THE LANDSCAPE AREAS SHALL BE IRRIGATED WITH A UNDERGROUND PIPED, LOW FLOW, MATCHED PRECIPITATION RATE SPRAY OR DRIP / BUBBLER TYPE IRRIGATION SYSTEM AND AN ELECTRICALLY OPERATED, REMOTE CONTROLLED TIME CLOCK /CONTROLLER.

11. WATER CONSERVATION: ALL LANDSCAPING AND IRRIGATION SYSTEMS SHALL BE DESIGNED IN A MANNER THAT CONSERVES WATER RESOURCES, AND ARE NOT UNDULY WATER-NEEDY. IRRIGATION SYSTEMS SHALL APPLY WATER EFFICIENTLY, PREVENT RUNOFF AND MINIMIZE RUNOFF AND WASTE. A "LANDSCAPE DOCUMENTATION PACKAGE" IN ACCORDANCE WITH THE CITY'S WATER EFFICIENT LANDSCAPE GUIDELINES WILL BE SUBMITTED AT BUILDING PERMIT STAGE.

LANDSCAPE CONCEPT

THE PROJECT PROPOSES TO CONSTRUCT APPROXIMATELY 11,929 QUARE FEET OF LANDSCAPE AND IRRIGATION IMPROVEMENTS (7% OF TOTAL SITE AREA) WITHIN SEVEN SEPARATE LOTS. THE LOTS ARE LOCATED ADJACENT TO HARBOR DRIVE AND MERRIMAC WAY AND WITHIN THE DEVELOPMENT AND WILL BE MAINTAINED BY A HOME OWNERS ASSOCIATION. ALL LANDSCAPE IMPROVEMENTS WILL BE CONSTRUCTED WITHIN THESE DESIGNATED LOTS. THE LANDSCAPE DESIGN WILL COMPLIMENT THE SPANISH COLONIAL AND CRAFTSMAN ARCHITECTURE PLANNED FOR THE SITE, WILL BE DROUGHT TOLERANT AND COMPLY WITH ALL APPLICABLE CITY STANDARDS AND REQUIREMENTS. DETAILED LANDSCAPE AND IRRIGATION CONSTRUCTION PLANS WILL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO OBTAINING BUILDING PERMITS.

RBF CONSULTING

0 30 60 Feet

6/08/11 JN 10-108150

2626 HARBOR BOULEVARD
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Preliminary Landscape Plan

Exhibit 2-6

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2.4 DISCRETIONARY ACTIONS

The City of Costa Mesa is the Lead Agency for the project and has discretionary authority over the proposed project. In order to implement the project, the project applicant would need to obtain various permits and approvals, including, but not limited to:

- CEQA Clearance;
- General Plan Amendment;
- Rezone;
- Tentative Tract Map for single family residences;
- Master Plan and Design Review; and
- Planning Commission and City Council approvals.

The project would also require administrative approvals from the City for issuance of grading, building, and occupancy permits as well as connection permits from utility providers. In addition, review of this project is required from other responsible agencies, including but not limited to the following public agencies:

- South Coast Air Quality Management District (SCAQMD)
- Mesa Consolidated Water District (MCWD)
- Costa Mesa Sanitary District (CMSD)
- Santa Ana Regional Water Quality Control Board (RWQCB)

3.0 INITIAL STUDY CHECKLIST

3.1 BACKGROUND

1.	**Project Title:** 33-Unit Residential Common Interest Development
2.	**Lead Agency Name and Address:** City of Costa Mesa 77 Fair Drive Costa Mesa, California 92628-1200
3.	**Contact Person and Phone Number:** Ms. Minoo Ashabi, AIA Senior Planner 714.754.5610
4.	**Project Location:** Northeast of the intersection of Harbor Boulevard and Merrimac Way. The project site has an existing address of 2626 Harbor Boulevard.
5.	**Project Sponsor's Name and Address:** Mr. Garrett Calacci Waterpointe Homes, LLC 190 Newport Center Dr. Suite 220 Newport Beach, CA 92660
6.	**General Plan Designation:** The project site is designated General Commercial
7.	**Zoning:** The project site is zoned C1 (Local Business) & P (Off-Street Parking District)
8.	**Description of the Project:** Refer to Section 2.2, *Project Characteristics*.
9.	**Surrounding Land Uses and Setting:** A car dealership is located to the immediate north, residential uses are located to the east and south, Harbor Boulevard is located to the immediate west, with residential uses south of Harbor Boulevard. Refer to Section 2.1, *Project Location and Setting*.
10.	**Other public agencies whose approval is required (e.g., permits, financing approval or participation agreement):** Refer to Section 2.4, *Agreements, Permits and Approvals*.

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Potentially Significant Unless Mitigated," as indicated by the checklist on the following pages.

	Aesthetics		Land Use and Planning
	Agriculture and Forest Resources		Mineral Resources
✓	Air Quality	✓	Noise
	Biological Resources		Population and Housing
	Cultural Resources		Public Services
	Geology and Soils		Recreation
	Greenhouse Gas Emissions		Transportation/Traffic
✓	Hazards and Hazardous Materials		Utilities & Service Systems
✓	Hydrology and Water Quality		Mandatory Findings of Significance

3.3 LEAD AGENCY DETERMINATION

On the basis of this initial evaluation:

I find that the proposed use COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ____

I find that although the proposal could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described in Section 4.0 have been added. A NEGATIVE DECLARATION will be prepared. ✓

I find that the proposal MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. ____

I find that the proposal MAY have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. ____

Signature	City of Costa Mesa
	Agency
Minoo Ashabi	July 15, 2011
Printed Name	Date

3.4 EVALUATION OF ENVIRONMENTAL IMPACTS

This section analyzes the potential environmental impacts associated with the proposed project. The issue areas evaluated in this Initial Study include:

- Aesthetics
- Agriculture and Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities and Service Systems

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines*, as amended, and used by the City of Costa Mesa in its environmental review process. For the preliminary environmental assessment undertaken as part of this Initial Study's preparation, a determination that there is a potential for significant effects indicates the need to more fully analyze the development's impacts and to identify mitigation.

For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the development. To each question, there are four possible responses:

- **No Impact.** The development will not have any measurable environmental impact on the environment.

- **Less Than Significant Impact.** The development will have the potential for impacting the environment, although this impact will be below established thresholds that are considered to be significant.

- **Less Than Significant With Mitigation Incorporated.** The development will have the potential to generate impacts, which may be considered as a significant effect on the environment, although mitigation measures or changes to the development's physical or operational characteristics can reduce these impacts to levels that are less than significant.

- **Potentially Significant Impact**. The development could have impacts, which may be considered significant, and therefore additional analysis is required to identify mitigation measures that could reduce potentially significant impacts to less than significant levels.

Where potential impacts are anticipated to be significant, mitigation measures will be required, so that impacts may be avoided or reduced to insignificant levels.

4.0 ENVIRONMENTAL ANALYSIS

The following is a discussion of potential project impacts as identified in the Initial Study.

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?				✓
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
c. Substantially degrade the existing visual character or quality of the site and its surroundings?			✓	
d. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			✓	

4.1 AESTHETICS

a) *Have a substantial adverse effect on a scenic vista?*

No Impact. According to the City of Costa Mesa General Plan, there are no officially designated scenic vistas or scenic highways within Costa Mesa. Existing conditions within the immediate vicinity are urbanized with no topographical features that create view or vista opportunities. Because the proposed project would not affect a City-designated scenic vista, no impacts to scenic vistas would result from implementation of the proposed project.

Mitigation Measures: No mitigation measures are required.

b) *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

No Impact. There are no state scenic highways located within the City, nor are any located near the project site. Additionally, there are no trees, rock outcroppings, or historic buildings located on the project site. Therefore, project implementation would not damage scenic resources within a state scenic highway.

Mitigation Measures: No mitigation measures are required.

c) *Substantially degrade the existing visual character or quality of the site and its surroundings?*

Less Than Significant Impact.

Short-Term Construction

Construction activities would be completed in three phases over the course of approximately two years. During this time, project construction activities would disrupt views across the project site from surrounding areas. Even though the site would be contained with mesh cover chain-link fencing, graded surfaces, construction debris, construction equipment, and truck traffic would be visible. Construction-related activities would be visible from the surrounding auto dealerships and from the residential uses located to the north, east, and south of the project site, as well as from motorists traveling along Harbor Boulevard and Merrimac Way. The perimeter wall would be constructed once rough grading is completed. Construction activities would be temporary and primarily occur behind the wall during most phases. Therefore, it is concluded that short-term project construction would not substantially degrade the existing visual character or quality of the site and its surroundings. Impacts would be less than significant in this regard.

Long-Term Operations

While the proposed project would alter the existing visual character of the site by replacing an automobile dealership with residential development, it would not substantially degrade the visual character of the site or its surroundings. The project would increase the number of on-site structures; however, the character of the area would be enhanced through the development of a high-quality architectural design (previously defined in the project description). Additionally, the project would be separated from the existing residences, roadways (i.e., Harbor and Merrimac Way), and auto dealerships by a six- to seven-foot slump-block wall around the entire perimeter of the project site. Refer to Exhibit 4.1-1, *Typical Project Elevation*, and Exhibit 4.1-2, *Typical Project Floor Plans*, for renderings of the proposed residential units.

Street level views from both Harbor Boulevard and Merrimac Way would consist of landscape treatments and the proposed perimeter wall. Street level views along Merrimac Way would also consist of the project entry, including a call box and sliding gate.

The project would be consistent with the maximum building height (27 ft.) allowed by the City of Costa Mesa Municipal Code (CMMC). Additionally, the CMMC has established development standards that would ensure that the proposed project would be compatible with surrounding uses. Specifically, the proposed project would be articulated through appropriate building and landscape setbacks, landscape character, roof projections, and building heights, as well as variations in building materials and colors, visually reducing the mass and height of the buildings. Development of the site would be subject to the City's discretionary review process, including review of development plans and discretionary permits, to ensure the project is consistent with General Plan policies as well as the CMMC. Therefore, it is concluded that project implementation would not substantially degrade the existing visual character or quality of the site and its surroundings. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

d) *Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?*

Less Than Significant Impact. There are two primary sources of light: light emanating from building interiors that pass through windows and light from exterior sources (i.e., street lighting, parking lot lighting, building illumination, security lighting, and landscape lighting). Depending upon the location of the light source and its proximity to adjacent light sensitive uses, light introduction can be a nuisance, affecting adjacent areas and diminishing the view of the clear night sky.

The proposed project is located within a developed area of the City. Currently, light and glare are emitted from the project site, due to existing light fixtures. Additionally, areas surrounding the project site are urbanized and contain various sources of light and glare. More specifically, light and glare in the project area is generated from the light emanating from building interiors and light from exterior sources (i.e., parking lot lighting, building illumination, and security lighting) associated with adjacent auto dealerships and residential uses. Light and glare caused by car headlights associated with Harbor Boulevard and Merrimac Way further influence lighting in the project area.

The project would include a perimeter wall and landscaping throughout the development, which would reduce the potential from off-site light sources such as automobile headlights and roadway lighting. The conversion of commercial land uses to residential land uses would not add substantial light sources to what currently exists in the project site vicinity.

New sources of light would be introduced with the development of residential uses, including light from residential interiors passing through windows and light from building exteriors such as lighting fixtures and street lighting. The project would be required to comply with the City's Standard Conditions of Approval which would address interior street lighting within the project site. Specifically, street light fixtures would be less than 18 ft. tall and lighting would be directed downward. Standard Condition 4.1-1 specifies the following:

Standard Condition

SC 4.1-1 Prior to the issuance of building permits, the applicant shall submit a Lighting Plan and Photometric Study for the approval of the City's Development Services Department. The Lighting Plan shall demonstrate compliance with the following:

- The mounting height of lights on light standards shall not exceed 18 ft. in any location on the project site unless approved by the Development Services Director.
- The intensity and location of lights on buildings shall be subject to the Development Services Director's approval.
- All site lighting fixtures shall be provided with a flat glass lens. Photometric calculations shall indicate the effect of the flat glass lens fixture efficiency.

- Lighting design and layout shall limit spill light to no more than 0.5 foot-candle at the property line of the surrounding neighbors, consistent with the level of lighting that is deemed necessary for safety and security purposes on site.

- Glare shields may be required for select light standards.

The types of land uses that are typically sensitive to excess light and glare include residential uses, hospitals, senior housing, and other types of uses where excessive light may disrupt sleep. The light sensitive receptors nearest (adjoining) the project site are the multi-family residential uses located to the north and east. Lighting associated with the proposed development is not anticipated to cause significant spillover impacts to these receptors due to intervening structures and the distance that exists between this use and the project site.

Existing light sources of adjacent commercial and residential properties are compatible with the proposed project and do not cause significant spillover on the project site. The project would include a perimeter wall and landscaping throughout the development that would reduce the potential from off-site light sources.

Review and approval of the required lighting plan by the City would ensure that spillover lighting would be minimized so as not to create light pollution disturbances to adjacent uses. Compliance with City lighting standards would further minimize potential spillover impacts to the sensitive receptors. Implementation of the proposed project would not create a source of substantial light or glare.

Mitigation Measures: No mitigation measures are required.

PLAN 1

PLAN 2

Source: KPI Inc. Architecture & Planning

6/08/11 JN 10-108150

2626 HARBOR BOULEVARD
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Typical Project Elevations

Exhibit 4.1-1

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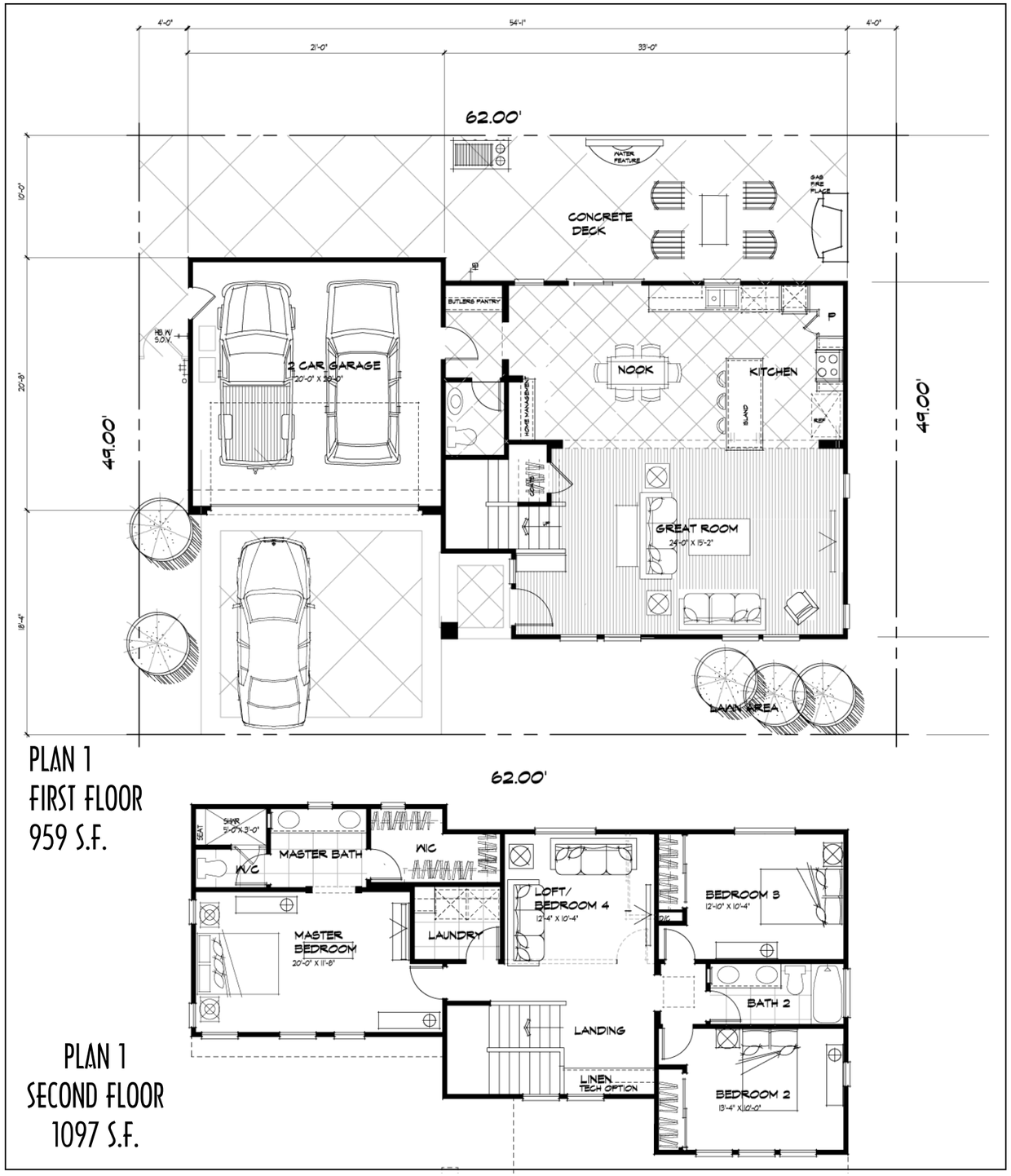
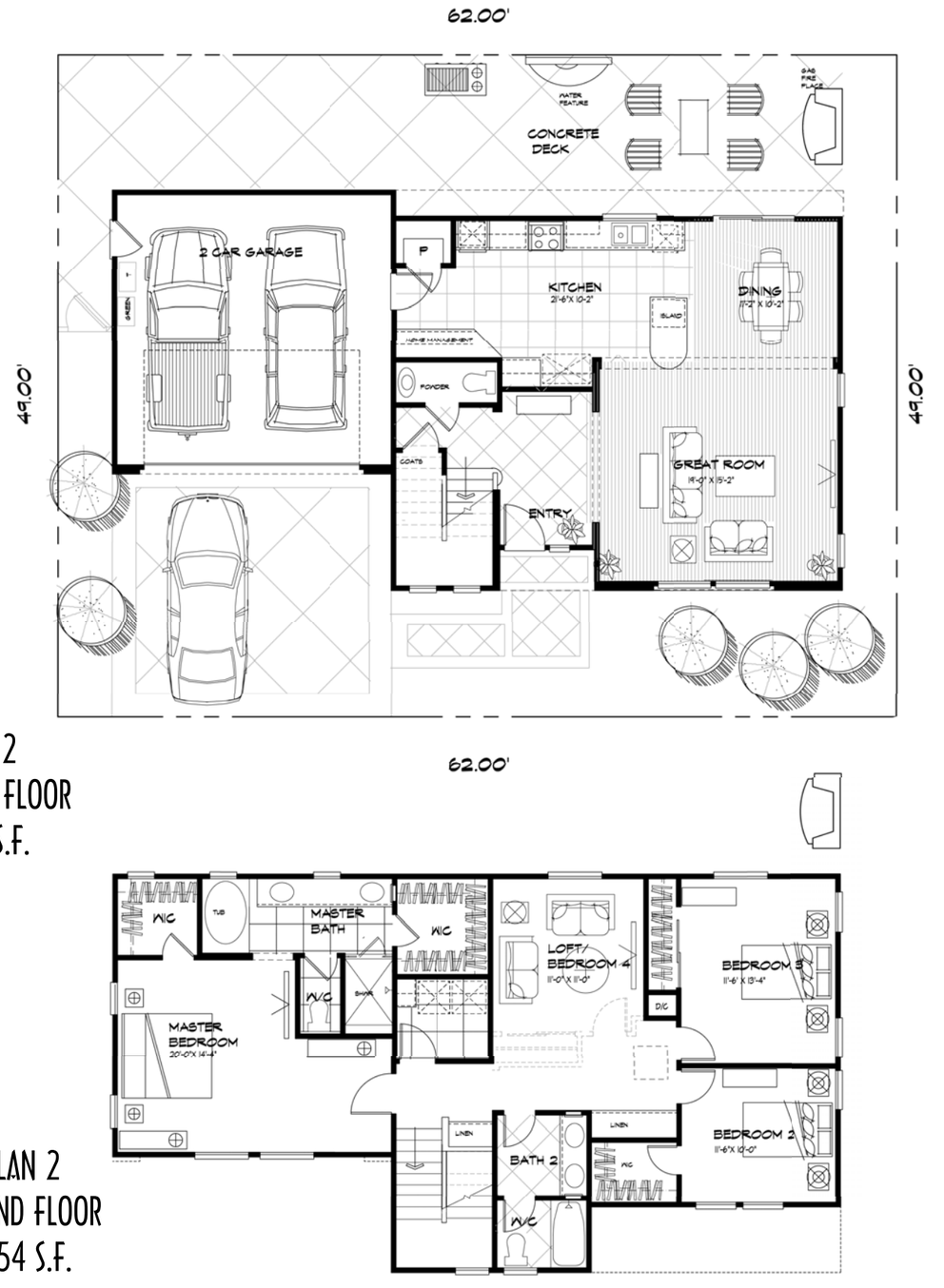


PLAN 1
FIRST FLOOR
959 S.F.

PLAN 1
SECOND FLOOR
1097 S.F.



PLAN 2
FIRST FLOOR
897 S.F.

PLAN 2
SECOND FLOOR
1254 S.F.

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4.2 AGRICULTURE AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In Determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided by the California Air Resources Board. Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 122220(g)), timberland as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				✓
d. Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e. Involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use?				✓

a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

No Impact. The project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. In addition, no farmland or agricultural activity exists on or in the vicinity of the project site. Therefore, project implementation would not result in the conversion of farmland to non-agricultural use.

Mitigation Measures: No mitigation measures are required.

b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

No Impact. The project site is zoned C1 (Local Business District) and P (Off-Street Parking District). The project site is not under a Williamson Act contract. Therefore, project implementation would not conflict with existing zoning for agricultural use or a Williamson Act contract.

Mitigation Measures: No mitigation measures are required.

c) *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 122220(g)), timberland as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*

No Impact. The project site is not used for forest land or timberland purposes and is not zoned Timberland Production. Therefore, no impact to forest land or timberland would occur as a result of the proposed project.

Mitigation Measures: No mitigation measures are required.

d) *Result in the loss of forest land or conversion of forest land to non-forest use?*

No Impact. The project site is not used for forest land. Therefore, no impact to forest land would occur as a result of the proposed project.

Mitigation Measures: No mitigation measures are required.

e) *Involve other changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use?*

No Impact. No farmland, agricultural, or forest land activity exists on or in the vicinity of the project site. The project would not result in environmental changes that would convert farmland to non-agricultural use or forest land to non-forest land use.

Mitigation Measures: No mitigation measures are required.

4.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?			✓	
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		✓		
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		✓		
d. Expose sensitive receptors to substantial pollutant concentrations?		✓		
e. Create objectionable odors affecting a substantial number of people?			✓	

a) *Conflict with or obstruct implementation of the applicable Air Quality Management Plan or Congestion Management Plan?*

Less Than Significant Impact. The proposed project is located within the South Coast Air Basin (Basin), which is governed by the South Coast Air Quality Management District (SCAQMD). Consistency with the *2007 Air Quality Management Plan for the South Coast Air Basin* (*2007 AQMP*) means that a project is consistent with the goals, objectives, and assumptions in the respective plan to achieve the Federal and State air quality standards.

According to the SCAQMD *CEQA Air Quality Handbook*, in order to determine consistency with the *2007 AQMP*, two main criteria must be addressed.

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) Would the project result in an increase in the frequency or severity of existing air quality violations?

Since the consistency criteria identified under the first criterion pertain to pollutant emissions relative to localized pollutant concentrations, rather than to total regional emissions, an analysis of the project's pollutant emissions relative to localized pollutant concentrations is used as the basis for evaluation project

consistency. As discussed under Impact Statement 4.3(d), localized concentrations of CO, NO_X, PM_{10}, and $PM_{2.5}$ have been analyzed for the project, and would be below SCAQMD thresholds. Therefore, the project would not increase the frequency or severity of existing air quality violations. SO_X emissions would be negligible during construction and long-term operations, and therefore would not have the potential to cause or affect a violation of the SO_X ambient air quality standard. Because ROGs are not a criteria pollutant, there is no ambient standard or localized threshold for ROGs. Due to the role ROG plays in ozone formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established.

b) *Would the project cause or contribute to new air quality violations?*

The proposed project would result in emissions that would be below the SCAQMD thresholds. Therefore, the project would not have the potential to cause or affect a violation of the ambient air quality standards.

c) *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

The proposed project would result in less than significant impacts with regard to localized concentrations during construction and operations. As such, the project would not delay the timely attainment of air quality standards or *2007 AQMP* emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and Southern California Association of Governments (SCAG) air quality policies, it is important to recognize that air quality planning within the Basin focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the proposed project exceeds the assumptions utilized in preparing the forecasts presented in the AQMP. Determining whether or not a project exceeds the assumptions reflected in the AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?*

A project is consistent with the AQMP in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. In the case of the *2007 AQMP*, three sources of data form the basis for the projections of air pollutant emissions: the *City of Costa Mesa General Plan* (*General Plan*), SCAG's *Growth Management* Chapter of the *Regional Comprehensive Plan and Guide* (*RCPG*), and SCAG's *2008 Regional Transportation Plan* (*RTP*). The *RTP* also provides socioeconomic forecast projections of regional population growth. The proposed project would require an

amendment to the General Plan to change the existing land use designation from General Commercial to Residential. A rezone would also be required to change the existing zoning designation of C-1 (Local Business) and P (Off-Street Parking) to R2-MD (Multiple Family Residential). The project's total population potential growth (91 persons) represents approximately 0.5 percent of the anticipated year 2035 population growth anticipated for the City. Thus, the proposed project would not result in growth exceeding SCAG's population projections and is not considered substantial in relation to the level of forecasted population growth. Therefore, the proposed project would result in a less than significant impact regarding population growth.

b) *Would the project implement all feasible air quality mitigation measures?*

The proposed project would result in less than significant air quality impacts (refer to Tables 4.3-1 and 4.3-2). As such, the proposed project meets this AQMP consistency criterion.

c) *Would the project be consistent with the land use planning strategies set forth in the AQMP?*

The project proposes infill development in a fully urbanized area served by existing roads and infrastructure. Project implementation would not require the provision of new public services that do not already occur within the area. Public services are provided throughout the City and the establishment of new sources of service would not be required. The proposed project would not conflict with City or SCAG policies.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of the project on air quality in the Basin. The proposed project would not result in a long-term impact on the region's ability to meet State and Federal air quality standards. Also, the proposed project would be consistent with the goals and policies of the AQMP for control of fugitive dust. As discussed above, the project is an infill project, and its long-term influence would also be consistent with the goals and policies of the AQMP.

Mitigation Measures: No mitigation measures are required.

b) *Violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Less Than Significant Impact With Mitigation Incorporated.

SHORT-TERM EMISSIONS

Future construction of the project site would generate short-term air quality impacts during grading and construction operations. Construction equipment would include tractors, concrete/industrial saws, dozers, graders, water trucks, excavators, pavers, rollers, cement mixers, and loaders. Exhaust emission factors for typical diesel-powered heavy equipment are based on the California Emissions Estimator Model (CalEEMod) program defaults. Variables factored into estimating the total construction emissions

include the level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported on- or off-site.

Fugitive Dust Emissions

Fugitive dust (PM_{10} and $PM_{2.5}$) from grading and construction is expected to be short-term and would cease following completion of the proposed project improvements. Most of this material is composed of inert silicates, which are less harmful to health than the complex organic particulates released from combustion sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_X and SO_X combining with ammonia. The greatest amount of fugitive dust generated is expected to occur during site grading and excavation. Dust generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particular concern is the amount of PM_{10} generated as a part of fugitive dust emissions.

The CalEEMod computer model calculates PM_{10} and $PM_{2.5}$ fugitive dust as part of the site earthwork activity emissions; refer to Table 4.3-1, *Construction Air Emissions*. Maximum particulate matter emissions would occur during the initial stages of construction, when grading activities would occur. With the application of Mitigation Measure AQ-1, which requires adherence to SCAQMD Rule 403 and other dust control techniques, the maximum mitigated particulate matter concentration would be 13.34 pounds per day (lbs/day) for PM_{10} and 4.95 lbs/day for $PM_{2.5}$ in Year 1; and 2.19 lbs/day for PM_{10} and 2.0 lbs/day for $PM_{2.5}$ in Year 2. Therefore, emissions in each year are below SCAQMD thresholds of 150 lbs/day for PM_{10} and 55 lbs/day for $PM_{2.5}$. Although the unmitigated particulate matter levels are below the SCAQMD thresholds in the absence of specific dust reduction measures, the mitigation has been recommended as the Basin is nonattainment for PM_{10} and $PM_{2.5}$.

Table 4.3-1
Construction Air Emissions

Emissions Source	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
2012						
Unmitigated Emissions	8.90	73.92	40.57	0.08	16.84	6.84
Mitigated Emissions[2,3]	8.90	73.92	40.57	0.08	13.34	4.95
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Is Threshold Exceeded After Mitigation?	***No***	***No***	***No***	***No***	***No***	***No***
2013						
Unmitigated Emissions	13.04	26.65	18.89	0.03	2.19	2.00

Table 4.3-1 (continued)
Construction Air Emissions

Emissions Source	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Mitigated Emissions[2,3]	13.04	26.65	18.89	0.03	2.19	2.00
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Is Threshold Exceeded After Mitigation?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1. Emissions were calculated using CalEEMod, as recommended by the SCAQMD.
2. The reduction/credits for construction emission mitigations are based on mitigation included in the CalEEMod model and as typically required by the SCAQMD through Rule 403. The mitigation includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces twice daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.
3. Refer to Appendix 9.1, *Air Monitoring Data*, for assumptions used in this analysis.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to/from the site. As presented in Table 4.3-1, construction equipment and worker vehicle exhaust emissions would be below the established SCAQMD thresholds. Therefore, air quality impacts from equipment and vehicle exhaust emission would be less than significant.

ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. In accordance with the methodology prescribed by the SCAQMD, the ROG emissions associated with paving and architectural coating have been quantified with the CalEEMod model. Based on the modeling, the proposed project would not result in an exceedance of ROG emissions and therefore would be considered less than significant.

Asbestos

Pursuant to guidance issued by the Governor's Office of Planning and Research, State Clearinghouse, lead agencies are encouraged to analyze potential impacts related to naturally occurring asbestos (NOA). Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by State, Federal, and international agencies and was identified as a toxic air contaminant by the CARB in 1986.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed.

As discussed in Hazards and Hazardous Materials, Section 4.8 b, asbestos containing materials may be present in existing on-site structures. The primarily concern is asbestos containing materials being released during demolition activities. Implementation of Mitigation Measure HAZ-1 would reduce potential impacts to a less than significant level. Refer to Section 4.8 b).

Serpentinite and/or ultramafic rock are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties of the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. According to the Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report* (dated August 2000), the proposed project is not located in an area where NOA is likely to be present. Therefore impacts would be considered less than significant.

LONG-TERM EMISSIONS

Operational emissions generated by both stationary and mobile sources would result from normal daily activities on the project site after occupation (i.e., increased concentrations of O_3, PM_{10}, and CO). Stationary area source emissions would be generated by the consumption of natural gas for space and water heating devices, the operation of landscape maintenance equipment, and the use of consumer products. Stationary energy emissions would result from energy consumption associated with the proposed project. Mobile emissions would be generated by the motor vehicles traveling to and from the project site. Emissions associated with each of these sources were calculated and are discussed below.

Mobile Source Emissions

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport SO_X, PM_{10}, and $PM_{2.5}$). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Project-generated vehicle emissions have been estimated using the CalEEMod model. This model predicts ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions from motor vehicle traffic associated with new or modified land uses; refer to Appendix 9.1, *Air Modeling Data*. According to the project's *Trip Generation and Ingress Queue Analysis for the Proposed Tentative Tract No. 17423 Project*, the proposed project would generate approximately

635 net less trips, as 951 trips from the auto dealership would be displaced. However, for the purposes of this analysis, a negative trip generation is not used. Rather, the operational emissions have been calculated for the 316 daily trips that would be generated for the 33 single family residential uses.[1] Table 4.3-2, *Long-Term Operational Air Emissions* presents the anticipated mobile source emissions. As shown in Table 4.3-2, unmitigated emissions generated by vehicle traffic associated with the proposed project would not exceed established SCAQMD thresholds. Impacts from mobile source air emissions would be less than significant.

Table 4.3-2
Long-Term Operational Air Emissions

Emissions Source	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Source Emissions[2]	4.91	0.19	13.76	0.03	1.76	1.76
Energy Emissions	0.04	0.35	0.15	0.00	0.03	0.03
Mobile Emissions	1.90	4.67	17.92	0.03	3.30	0.21
Total Emissions	***6.85***	***5.21***	***31.83***	***0.06***	***5.09***	***2.00***
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Is Threshold Exceeded? (Significant Impact?)	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1. Based on CalEEMod modeling results, worst-case seasonal emissions for area and mobile emissions have been modeled.
2. Area source excludes the use of fireplaces and wood burning stoves.
3. Refer to Appendix 9.1, *Air Modeling Data*, for assumptions used in this analysis.

Stationary Source Emissions

Stationary source emissions would be generated due to an increased demand for electrical energy and natural gas with the development of the proposed project. This assumption is based on the supposition that those power plants supplying electricity to the site are utilizing fossil fuels. Electric power generating plants are distributed throughout the Basin and western United States, and their emissions contribute to the total regional pollutant burden. The primary use of natural gas by the proposed land uses would be for combustion to produce space heating, water heating, other miscellaneous heating, or air conditioning, consumer products, and landscaping. As indicated in Table 4.3-2, stationary source emissions from the proposed project would not exceed SCAQMD thresholds. Thus, impacts from area source emissions would be less than significant.

Mitigation Measures:

AQ-1 Prior to issuance of any Grading Permit, the Director of Public Works and the Building Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression

[1] Institute of Transportation Engineers Trip Generation Rate for single family detached housing is 9.57 trips per day per unit.

techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce short-term fugitive dust impacts on nearby sensitive receptors:

- All active portions of the construction site shall be watered at least twice daily to prevent excessive amounts of dust;
- On-site vehicle speed shall be limited to 15 miles per hour;
- All on-site roads shall be paved where feasible, watered as needed (to maintain a moisture content of 12 percent), or chemically stabilized;
- Visible dust beyond the property line which emanates from the project shall be prevented to the maximum extent feasible;
- All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site;
- Track-out devices shall be used at all construction site access points;
- All delivery truck tires shall be watered down and/or scraped down prior to departing the job site;
- Replace ground cover on disturbed areas quickly; and
- Implement street sweeping program with Rule 1186-compliant PM_{10} efficient vacuum units.

AQ-2 All trucks that are to haul excavated or graded material on-site shall comply with State Vehicle Code Section 23114 (Spilling Loads on Highways), with special attention to Sections 23114(b)(F), (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads. Prior to the issuance of grading permits, the Applicant shall coordinate with the appropriate City of Costa Mesa Engineer on hauling activities compliance.

c) *Result in a cumulatively considerable net increase of any criteria pollutant for which the air basin is nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?*

Less Than Significant With Mitigation Incorporated.

CUMULATIVE SHORT-TERM EMISSIONS

With respect to the proposed project's construction-period air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the *2007 AQMP* pursuant to Federal Clean Air Act mandates. As such, the proposed project would comply with SCAQMD Rule 403 requirements, and implement all feasible mitigation measures. Rules 403 requires that fugitive dust be controlled with the best available control measures in order to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the proposed project. In addition, the proposed project would comply with adopted *2007 AQMP* emissions control measures. Per SCAQMD rules and mandates, as well as the

CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects throughout the Basin, which would include related projects.

Compliance with SCAQMD rules and regulations, as well as implementation of Mitigation Measures AQ-1 and AQ-2, would reduce the project's construction-related impacts to a less than significant level. Thus, it can be reasonably inferred that the project-related construction emissions, in combination with those from other projects in the area, would not substantially deteriorate the local air quality. Thus, a less than significant impact would occur in this regard.

CUMULATIVE LONG-TERM EMISSIONS

The SCAQMD neither recommends quantified analysis of cumulative construction or operational emissions, nor does it provide separate methodologies or thresholds of significance to be used to assess cumulative construction or operational impacts. However, if individual development projects generate operational emissions that exceed the SCAQMD recommended daily thresholds, project-specific impacts would also cause a cumulative considerable increase in emissions for those pollutants for which the Basin is in non-attainment.

As discussed previously, the proposed project is not anticipated to result in long-term air quality impacts. Additionally, adherence to SCAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Emission reduction technology, strategies, and plans are constantly being developed. As a result, the proposed project would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, cumulative operational impacts associated with project operations would be less than significant.

Mitigation Measures: Refer to Mitigation Measures AQ-1 and AQ-2.

d) *Expose sensitive receptors to substantial pollutant concentrations?*

Less Than Significant With Mitigation Incorporated. Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

To identify impacts to sensitive receptors, the SCAQMD recommends addressing localized significance thresholds for construction and operations impacts, as well as a carbon monoxide hot-spots analysis.

Localized Significance Thresholds

Localized Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level proposed projects. The SCAQMD provides the LST lookup tables for one, two, and five acre projects emitting CO, NO_X, $PM_{2.5}$, or PM_{10}. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD recommends that any project over five acres should perform air quality dispersion modeling to assess impacts to nearby sensitive receptors. The project is located within Sensitive Receptor Area (SRA) 18, North Coastal Orange County.

For project operations, the conservative five-acre threshold for receptors of 25 meters away was utilized. As seen in Table 4.3-3, *Localized Significance of Emissions*, operational emissions are far below the LSTs, and a less than significant impact would occur in this regard.

Based on the SCAQMD guidance on applying CalEEMod to LSTs, the project would disturb no more than 4 acres of land per day (note that this exceeds the total project acreage of 3.71); therefore, the LST thresholds for two acres were conservatively utilized for the construction LST analysis. The closest sensitive receptors to the project site are residential uses adjacent to the east of the project site. These sensitive land uses may be potentially affected by air pollutant emissions generated during on-site construction activities. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. As the nearest sensitive uses are adjacent to the project site, the LST value for 25 meters was utilized, as this is the most conservative option the methodology allows.

As shown in Table 4.3-3, construction and operational emissions would not exceed the LSTs for SRA 18. Therefore, localized significance impacts would be less than significant.

Table 4.3-3
Localized Significance of Emissions

Source	Pollutant (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction				
2012				
Total Mitigated On-Site Emissions	69.62	36.96	5.97	4.78
Localized Significance Threshold	131	962	7	5
Thresholds Exceeded?	***No***	***No***	***No***	***No***
2013				
Total Mitigated On-Site Emissions	25.89	17.72	1.74	1.74
Localized Significance Threshold	131	962	7	5
Thresholds Exceeded?	***No***	***No***	***No***	***No***

Table 4.3-3 (continued)
Localized Significance of Emissions

Source	Pollutant (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Operational				
Area Source Emissions	0.19	13.76	1.76	1.76
Localized Significance Threshold	131	962	2	2
Thresholds Exceeded?	***No***	***No***	***No***	***No***

Note:
1. The Localized Significance Threshold was determined using Appendix C of the SCAQMD *Final Localized Significant Threshold Methodology* guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the anticipated daily acreage disturbance for construction (approximately 4 acres; therefore the conservative 2-acre threshold was used), the total acreage for operational (conservatively uses the 2-acre threshold), the distance to sensitive receptors, and the source receptor area (SRA 18).

Carbon Monoxide Hotspots

The SCAQMD requires a quantified assessment of a CO hot-spot when a project increases the volume to capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service (LOS) D or worse. Based on the *Trip Generation and Ingress Queue Analysis for the Proposed Tentative Tract No. 17423 Project*, the project would generate a maximum of 24 A.M. peak hours trips and 33 P.M. peak hour trips. This nominal amount of traffic would not be of a sufficient magnitude to create a CO hotspot. Impacts regarding CO hot-spots would be less than significant.

Mitigation Measures:

Refer to Mitigation Measures AQ-1 and AQ-2.

e) *Create objectionable odors affecting a substantial number of people?*

Less Than Significant Impact. According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses identified by the SCAQMD as being associated with odors.

Construction activity associated with the project may generate detectable odors from heavy-duty equipment exhaust. Construction related odors would be short-term in nature and cease upon project completion. Any impacts to existing adjacent land uses would be short-term, as previously noted, and are considered less than significant given the project size.

Mitigation Measures: No mitigation measures are required.

4.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				✓
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				✓
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				✓
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

No Impact. The project site is developed with two structures and associated parking. No bare soils or dense vegetation are present on site. Additionally, no endangered, rare, threatened, or special status plant species (or associated habitats) or wildlife species designated by the USFWS, CDFG, or CNPS are known to occur on site. Project implementation would not result in a substantial adverse effect, either directly or through habitat modifications, on any sensitive species.

Mitigation Measures: No mitigation measures are required.

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

No Impact. There is no riparian habitat or other sensitive natural communities present on the project site. Project implementation would not significantly impact any riparian habitat or other sensitive natural community.

Mitigation Measures: No mitigation measures are required.

c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, costal, etc.) through direct removal, filling, hydrological interruption, or other means?*

No Impact. There are no federally protected wetlands present on the project site. Project implementation would not impact federally protected wetlands through direct removal, filling, hydrological interruption or other means.

Mitigation Measures: No mitigation measures are required.

d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

No Impact. The project site and surrounding areas are completely developed and/or disturbed. The project site is surrounded by urban uses on all four sides; therefore, the site does not function as a wildlife movement corridor. Project implementation would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Mitigation Measures: No mitigation measures are required.

e) *Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?*

No Impact. The project site does not contain biological resources, nor is it zoned open space. Therefore, the project would not conflict with any local policies or ordinances protecting biological resources.

Mitigation Measures: No mitigation measures are required.

f) *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

Less Than Significant Impact. According to the City of Costa Mesa Conservation Element and the Open Space and Recreation Element, no Habitat Conservation Plan, Natural Community Conservation Plan, or other applicable Habitat Conservation Plan is within or near the project site. Therefore, the project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Mitigation Measures: No mitigation measures are required.

4.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5?				✓
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?			✓	
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			✓	
d. Disturb any human remains, including those interred outside of formal cemeteries?			✓	

a) *Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5?*

No Impact. The project site is currently developed with non-historic structures and associated parking. The existing structures were constructed in 1968. Additionally, the City of Costa Mesa General Plan Historic and Cultural Resources Element does not identify any known historic resources within or adjacent to the project site. Therefore, project implementation would not cause a substantial adverse change in the significance of a historical resource.

Mitigation Measures: No mitigation measures are required.

b) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?*

Less Than Significant Impact. The City of Costa Mesa General Plan EIR Historic and Cultural Resources Element does not identify any known archaeological resources within or adjacent to the project site. In addition, the project site has previously been subject to extensive disruption from development and may contain artificial fill materials. As such, any archaeological resources, which may have existed within the project site, have likely been disturbed. Notwithstanding, ground-disturbing activities, such as grading or excavation, could unearth undocumented subsurface archaeological resources. The project would be required to comply with Standard Condition 4.5-1 which would ensure that impacts to unknown cultural resources encountered during construction activities are adequately addressed. Compliance with the Standard Condition would reduce potential impacts to a less than significant level.

Standard Condition

SC 4.5-1 In the event that archeological resources are unearthed during project subsurface activities, all earth-disturbing work within a 100-ft radius shall be temporarily suspended or redirected until an archeologist has evaluated the nature and significance of the find.

Mitigation Measures: No mitigation measures are required.

c) *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Less Than Significant Impact. The City of Costa Mesa General Plan EIR Historic and Cultural Resources Element does not identify any known paleotological resources within or adjacent to the project site. Plant and animal fossils are typically found within sedimentary rock deposits. Given the geology of the project area, it is unlikely that unknown paleontological resources would exist within the project site. In addition, the project site has already been subject to extensive ground disturbance and development. As such, any paleontological resources, which may have existed within the project site, have likely been disturbed. Notwithstanding, ground-disturbing activities, such as grading or excavation, could unearth undocumented subsurface paleontological resources. Standard Condition 4.5-2 provides instructions in the event a material of potential cultural significance is uncovered. Compliance with the Standard Condition would reduce potential impacts to a less than significant level.

Standard Condition

SC 4.5-2 In the event that paleontological resources are unearthed during subsurface construction activities, all earth-disturbing work within a 100-ft radius of the find shall be temporarily suspended or redirected until a paleontologist has evaluated the nature and significance of the find.

Mitigation Measures: No mitigation measures are required.

d) *Disturb any human remains, including those interred outside of formal cemeteries?*

Less Than Significant Impact. No conditions exist that suggest human remains are likely to be found on the project site. Due to the level of past disturbance on-site, it is not anticipated that human remains, including those interred outside of formal cemeteries, would be encountered during earth removal or disturbance activities. If human remains are found, those remains would require proper treatment, in accordance with applicable laws. State of California Public Resources Health and Safety Code Section 7050.5-7055 describe the general provisions for human remains. Specifically, Health and Safety Code Section 7050.5 describes the requirements if any human remains are accidentally discovered during excavation of a site. As required by State law, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would be implemented, including notification of the County Coroner, notification of the Native American Heritage Commission and consultation with the individual identified by the Native American Heritage Commission to be the “most likely descendant.” If human remains are found during excavation, excavation must stop in the vicinity of the find and

any area that is reasonably suspected to overly adjacent remains until the County coroner has been called out, and the remains have been investigated and appropriate recommendations have been made for the treatment and disposition of the remains. Following compliance with State regulations, which detail the appropriate actions necessary in the event human remains are encountered, impacts in this regard would be considered less than significant. Standard Condition 4.5-3 would further minimize potential impacts by ensuring appropriate examination, treatment, and protection of human remains, if any are discovered. Compliance with the Standard Condition would reduce potential impacts to a less than significant level.

Standard Condition

SC 4.5-3 If human remains are unearthed, State Health and Safety Code Section 7050.5 require that no further disturbance shall occur until the County coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then contact the most likely descendant of the deceased Native American, who will then serve as consultant on how to proceed with the remains.

Mitigation Measures: No mitigation measures are required.

4.6 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✓
2) Strong seismic ground shaking?			✓	
3) Seismic-related ground failure, including liquefaction?			✓	
4) Landslides?			✓	
b. Result in substantial soil erosion or the loss of topsoil?				✓
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓	
d. Be located on expansive soil, as defined in Table 18-1-B of the California Building Code (2001), creating substantial risks to life or property?			✓	
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?				✓

a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*

1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. The project site is located in southern California, a known seismically active region. Active and potentially active faults within southern California are capable of producing seismic shaking at the project site, and it is expected that the proposed project would periodically experience ground acceleration as a result of exposure to moderate to large magnitude earthquakes. Seismic ground shaking on one of the nearby regional faults may cause damage to development. For the purposes of the Alquist-Priolo Earthquake Fault Zoning Map Act, the State of California defines active faults as

those that have historically produced earthquakes or shown evidence of movement within the past 11,000 years (during the Holocene Epoch).[2]

Exhibit SAF-3, *Regional Fault Map*, of the Costa Mesa General Plan illustrates the major regional faults in the City's vicinity. According to Exhibit SAF--3, there are no Alquist-Priolo Earthquake Fault Zones (formerly called Special Studies Zones) that traverse the City. Therefore, project implementation would not expose people or structures to potential substantial adverse effects involving fault rupture.

Mitigation Measures: No mitigation measures are required.

2) Strong seismic ground shaking?

Less Than Significant Impact. The Costa Mesa General Plan and General Plan EIR concludes the City of Costa Mesa is located in close proximity to two major fault zones: the Newport-Inglewood fault zone and the Whittier-Elsinore fault zone. Each fault zone has the potential to cause moderate to large earthquakes that would cause ground shaking in Costa Mesa as well as other portions of southern California.[3] Consequently, project implementation could expose on-site structures and people to substantial seismic hazards if an intense earthquake occurred along any of the major faults in the area. The intensity of ground shaking at the project site would depend upon the magnitude of the earthquake, distance to the epicenter, and the geology of the area between the epicenter and the project area.

According to the Seismic Safety Commission, the project site is located within Seismic Zone 4, as is most of Southern California. Structures are required to be designed in accordance with applicable standards of the current California Building Code (CBC). Specific engineering design and construction measures, as required by the CBC for the construction of new buildings and/or structures, would be implemented to anticipate and avoid the potential for adverse impacts to human life and property caused by seismically induced groundshaking.

In compliance with standard code requirements, construction of the project would be subject to the most recent CBC and CalGreen Code. In addition, the project would be required to comply with the recommendations of the projects geotechnical engineer as well as the CMMC seismic design category criteria. Compliance with the CBC and the CMMC would reduce potential impacts associated with strong ground shaking to a less than significant level. In addition, compliance with Standard Condition 4.6-1 would reduce potential impacts to a less than significant level.

Standard Condition

SC 4.6-1 Design, grading, and construction shall be performed in accordance with the requirements of the California Building Code applicable at the time of grading

[2] California Department of Conservation and California Geologic Survey. Potentially active faults have demonstrated displacement within the last 1.6 million years (during the Pleistocene Epoch), but do not displace Holocene Strata. Inactive faults do not exhibit displacement younger than 1.6 million years before the present.

[3] City of Costa Mesa General Plan, Chapter 8, *Safety Element*, *Seismicity*, Adopted January 22, 2002, Page SAF-4.

as well as the appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in a final written report, subject to review by the City of Costa Mesa Building official prior to issuance of grading permits.

Mitigation Measures: No mitigation measures are required.

3) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction of cohesionless soils can be caused by strong vibratory motion due to earthquakes. Liquefaction is characterized by a loss of shear strength in the affected soil layers, thereby causing the soils to behave as a viscous liquid.

The Costa Mesa General Plan and General Plan EIR concluded that even though Costa Mesa has been subjected to strong ground shaking in the past (i.e. the 1993 Long Beach earthquake), available historic records fail to confirm an instance of liquefaction. However, instances of liquefaction have been reported in the nearby cities of Huntington Beach and Newport Beach. The potential exists for liquefaction in localized sections within the northwest and western portions of the City. According to the General Plan the site is located within Zone A and identified as having low potential for liquefaction.[4] Notwithstanding, the City requires compliance with the CBC and all provisions related to construction and design guidelines, which prevent injury or other adverse effects potentially caused by liquefaction. Given that the potential for on-site liquefaction is considered low and the project is subject to compliance with the CBC guidelines and geotechnical reports in order to ensure that proper foundations would be designed to safeguard against the potential risks associated with liquefaction, project implementation would result in less than significant impacts associated with the exposure of people or structures to potential substantial adverse effects involving liquefaction. In addition, compliance with Standard Condition 4.6-2 would reduce potential impacts to a less than significant level.

Standard Condition

SC 4.6-2 Prior to the issuance of grading permits, the project applicant shall provide the City of Costa Mesa Department of Building Safety with a geotechnical investigation of the project site detailing recommendations for remedial grading in order to reduce the potential of on-site soils to cause unstable conditions. Design, grading, and construction shall be performed in accordance with the requirements of the California Building Code applicable at the time of grading, appropriate local grading regulations, and the recommendations of the geotechnical consultant as summarized in a final written report, subject to review by the City of Costa Mesa Department of Building Safety.

Mitigation Measures: No mitigation measures are required.

[4] Ibid., page SAF8.

4) Landslides?

Less Than Significant Impact. The project site and surrounding topography is generally flat, making the possibility for landslides extremely remote. Consequently, there is no potential for landslides to occur on or near the proposed project site as a result of the proposed development. Therefore, project implementation would result in no impact associated with the exposure of people or structures to potential substantial adverse effects involving landslides.

Mitigation Measures: No mitigation measures are required.

b) *Result in substantial soil erosion or the loss of topsoil?*

Less Than Significant Impact. Clearing, grading, and excavation of the project site would expose soils to short-term erosion by wind and water. During construction, standard erosion control measures would be used to minimize the rate of erosion and would reduce impacts related to soil erosion to below a level of significance. All demolition and construction activities within the project would be subject to compliance with the CBC, as follows:

- CBC Chapter 70: Standards that would ensure implementation of appropriate measures during grading activities to reduce soil erosion.
- CBC Chapter 33: Regulates excavation activities and the construction of foundations.
- CBC Appendix Chapter 33: Regulates grading activities, including drainage and erosion control.

Following compliance with CBC requirements as well as implementation of the standard conditions below, project implementation would result in a less than significant impact regarding soil erosion.

SC 4.6-3 Construction General Permit Notice of Intent (NOI) Design: Prior to the issuance of preliminary or precise grading permits, the project applicant shall provide the City Engineer with evidence that an NOI has been filed with the Storm Water Resources Control Board (SWRCB). Such evidence shall consist of a copy of the NOI stamped by the SWRCB or Regional Water Quality Control Board (RWQCB), or a letter from either agency stating that the NOI has been filed.

SC 4.6-4 Construction Phase Storm Water Pollution Prevention Plan (SWPPP): Prior to the issuance of grading permits, the applicant shall prepare a SWPPP that complies with the Construction General Permit and will include at a minimum the following:

- Discuss in detail the BMPs planned for the project related to control of sediment and erosion, nonsediment pollutants, and potential pollutants in non-storm water discharges;
- Describe post-construction BMPs for the project;

- Explain the maintenance program for the project's BMPs;
- List the parties responsible for SWPPP implementation and BMP maintenance during and after grading. The project applicant shall implement the SWPPP and modify the SWPPP as directed by the Construction General Permit.

Mitigation Measures: No mitigation measures are required.

c) *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

Less Than Significant Impact. As previously stated, the Costa Mesa General Plan and General Plan EIR has concluded that the potential for liquefaction is considered low at the project site and that it is not located within a designated liquefaction hazard zone. However, use of unsuitable soils would have the potential to create future lateral spreading, subsidence, or collapse problems leading to building settlement and/or utility line disruption. During the grading process the remediation of these weak soils in order to achieve the appropriate compaction or stability can reduce or eliminate the potential of these soils to cause unstable conditions to a less than significant level.

Standard conditions are recommended that require a site-specific geotechnical study, which includes an evaluation of soil conditions and requires recommendations for ground preparation and earthwork specific to the site. The study would be required to identify unsuitable soil conditions including liquefaction, subsidence, and collapse. Additionally, the findings of the study would become incorporated into the project's design. With adherence to Standard Condition 4.6-2, project implementation would result in a less than significant impact regarding unstable soils.

Mitigation Measures: No mitigation measures are required.

d) *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?*

Less Than Significant Impact. Expansive soils have a significant amount of clay particles that can give up water (shrink) or take on water (swell). The change in volume exerts stress on buildings and other loads placed on these soils. The occurrence of these soils on the project site is unknown. Implementation of Standard Condition 4.6-2 would reduce potential impacts regarding expansive soils to less than significant levels.

Mitigation Measures: No mitigation measures are required.

e) *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

No Impact. The project would not involve the use of septic tanks or alternative wastewater disposal systems, since a sewer system is available to the proposed project.

Mitigation Measures: No mitigation measures are required.

4.7 GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b. Conflict with an applicable plan, policy, or regulations adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Less Than Significant Impact. A numerical threshold for determining the significance of greenhouse gas (GHG) emissions in the South Coast Air Basin (Basin) has not been established by the South Coast Qir Quality Management District (SCAQMD). The SCAQMD adopted an interim GHG threshold of significance for projects where it is the Lead Agency using a tiered approach for determining significance. The objective of the SCAQMD's interim GHG threshold of significance proposal is to achieve a GHG emission capture rate of 90 percent of all new or modified stationary source projects. The SCAQMD asserts that a GHG threshold of significance based on a 90 percent emission capture rate is considered to be more appropriate to address the long-term adverse impacts associated with global climate change because most projects will be required to implement GHG reduction measures. The SCAQMD further asserts that a 90 percent GHG emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. The following bullet points describe the basic structure of SCAQMD's tiered interim GHG significance threshold for stationary sources:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA. For example, Senate Bill (SB) 97 specifically exempts a limited number of projects until it expired in 2010. If the project qualifies for an exemption, no further action is required. If the project does not qualify for an exemption, then it would move to the next tier.

- Tier 2 consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The concept embodied in this tier is equivalent to the existing consistency determination requirements in *CEQA Guidelines* Sections 15064(h)(3), 15125(d), or 15152(a). The GHG reduction plan must, at a minimum, comply with Assembly Bill (AB) 32 GHG reduction goals, include an emissions inventory agreed upon by either the California Air Resources Board (CARB) or the SCAQMD, have been analyzed

under CEQA and have a certified Final CEQA document, and have monitoring and enforcement components. If the proposed project is consistent with the qualifying local GHG reduction plan, it is not significant for GHG emissions. If the project is not consistent with a local GHG reduction plan, there is no approved plan, or the GHG reduction plan does not include all of the components described above, the project would move to Tier 3.

- Tier 3 establishes a screening significance threshold level to determine significance using a 90 percent GHG emission capture rate. The 90 percent capture rate GHG significance screening level in Tier 3 for stationary sources was derived using the following methodology. Using the SCAQMD's Annual Emission Reporting (AER) Program, the reported annual natural gas consumption for 1,297 permitted facilities for 2006 through 2007 was compiled and the facilities were rank-ordered to estimate the 90th percentile of the cumulative natural gas usage for all permitted facilities. Approximately 10 percent of facilities evaluated comprise more than 90 percent of the total natural gas consumption, which corresponds to 10,000 metric tons (MT) of carbon dioxide equivalents per year ($MTCO_2eq/yr$)[5] (the majority of combustion emissions comprise CO_2). At the November 5, 2009 Board meeting SCAQMD Staff recommended the following GHG screening thresholds: residential: 3,500 $MTCO_2eq/yr$, Commercial: 1,400 $MTCO_2eq/yr$, Mixed use: 3,000 $MTCO_2eq/yr$. If a project's GHG emissions exceed the GHG screening threshold, the project would move to Tier 4.

- Tier 4 establishes a decision tree approach that includes compliance options for projects that have incorporated design features into the project and/or implement GHG mitigation measures.

  - Option No. 1: Reduction Target (percentage)
    - Max percentage reduction (land use sector reduction - 23.9 percent, Scoping Plan overall reduction - 28 percent)
    - Target updated as AB 32 Scoping Plan revised
    - Residual emissions not to exceed 25,000 $MTCO_2eq/yr$
    - Base case scenario to be defined
  - Option No. 2: Efficiency Target
    - 4.6 $MTCO_2eq$ per service population (SP)[6] for project level threshold (land use emissions only) and total residual emissions not to exceed 25,000 $MTCO_2eq/yr$
    - 6.6 $MTCO_2eq$ per SP for plan level threshold (all sectors). If a project fails to meet any of these emissions reduction targets and efficiency targets, the project would move to Tier 5.

[5] Carbon Dioxide Equivalent (CO_2eq) – A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.
[6] SP = service population (residents + employees).

- Tier 5 would require projects that implement off-site GHG mitigation that includes purchasing offsets to reduce GHG emission impacts to purchase sufficient offsets for the life of the project (30 years) to reduce GHG emissions to less than the applicable GHG screening threshold level.

Accordingly, the analysis will determine if impacts are significant if they exceed the SCAQMD's interim threshold of 3,000 $MTCO_2eq/yr$.

DIRECT PROJECT-RELATED SOURCES OF GREENHOUSE GASES

Direct project-related GHG emissions include emissions from construction activities, area sources, and mobile sources. Table 4.7-1, *Greenhouse Gas Emissions*, presents the estimated CO_2, N_2O, and CH_4 emissions.

Table 4.7-1
Greenhouse Gas Emissions

Source	CO_2	CH_4		N_2O		Total Metric Tons of CO_2eq[3]
	Metric Tons/yr	Metric Tons/yr	Metric Tons of CO_2eq	Metric Tons/yr	Metric Tons of CO_2eq	
Direct Emissions						
▪ Construction (amortized over 30 years)	23.07	0.00	0.06	0.00	0.00	23.13
▪ Area Source[1]	24.53	0.01	0.21	0.00	0.19	24.93
▪ Mobile Source[2]	444.23	0.02	0.42	0.00	0.05	444.70
Total Direct Emissions[3]	*491.83*	*0.03*	*0.69*	*0.00*	*0.24*	***492.76***
Indirect Emissions						
▪ Energy	136.41	0.02	0.42	0.00	0.42	137.25
▪ Water Demand	12.55	0.07	1.15	0.00	0.81	14.51
▪ Waste	7.82	0.46	9.70	0.00	0.01	17.53
Total Indirect Emissions[3]	*156.78*	*0.55*	*11.27*	*0.00*	*1.24*	***169.29***
Total Project-Related Emissions[3]	***638.92 $MTCO_2eq/yr$***					
GHG Threshold	**3,000 $MTCO_2eq/yr$**					
Significance	***Less Than Significant Impact***					

Notes:
1. Mitigated emissions calculated using CalEEMod computer model.
2. CO_2 Equivalent values calculated using the U.S. EPA Website, *Greenhouse Gas Equivalencies Calculator*, http://www.epa.gov/cleanenergy/energy-resources/calculator.html, accessed June 2011.
3. Totals may be slightly off due to rounding.

Refer to Appendix 9.1, *Air Monitoring Data*, for detailed model input/output data.

The CalEEMod computer model outputs contained within the Appendix 9.1, *Air Modeling Data*, were used to calculate mobile source, area source, and construction GHG emissions. Operational GHG estimations are based on energy emissions from natural gas usage and automobile emissions. Total project-related direct operational emissions would result in 492.76 $MTCO_2eq/yr$.

INDIRECT PROJECT RELATED SOURCES OF GREENHOUSE GASES

Electricity Consumption. Energy Consumption emissions were calculated using the CalEEMod model and project-specific land use data. As a result, the project would indirectly result in 137.25 $MTCO_2eq$/year due to electricity usage; refer to Table 4.7-1.

Water Supply. Emissions from indirect energy impacts due to water supply would result in 14.51 $MTCO_2eq$/year.

Total Project-Related Sources of Greenhouse Gases. As shown in Table 4.7-1, the total amount of project-related GHG emissions from direct and indirect sources combined would total 638.92 $MTCO_2eq$/yr.

CONCLUSION

As shown in Table 4.7-1, operational-related emissions would be 638.92 $MTCO_2eq$/yr. As operational-related GHG emissions would not exceed the SCAQMD GHG significance threshold, impacts would be less than significant

Mitigation Measures: No mitigation measures are required.

b) *Conflict with an applicable plan, policy, or regulations adopted for the purpose of reducing the emissions of greenhouse gases?*

Less Than Significant Impact. The City does not currently have an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Therefore, the proposed project would not conflict with an adopted plan, policy, or regulation pertaining to GHGs. Also, the proposed project would result in operational GHG emissions below the 3,000 $MTCO_2eq$/yr threshold. Therefore, the project would not hinder the State's GHG reduction goals established by AB 32. Thus, a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

4.8 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		✓		
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			✓	
d. Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and, as a result, would it create a significant hazard to the public or the environment?			✓	
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			✓	
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			✓	
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			✓	
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				✓

a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Less Than Significant Impact. Hazardous materials are not typically associated with residential uses. Minor cleaning products along with the occasional use of pesticides and herbicides for landscape maintenance of the project site are the extent of materials used and applicable here. Thus, as the presence and on-site storage of these materials are common for residential uses, impacts in this regard are less than significant.

Limited amounts of some hazardous materials could be used in the construction of the project, including standard construction materials (e.g., paints and solvents), vehicle fuel, and other hazardous materials. The routine transportation, use, and disposal of these

materials would be required to adhere to standard State and local procedures and regulations for handling, storage, and disposal of these hazardous substances. With compliance with the existing State and local procedures that are intended to minimize potential health risks associated with their use or the accidental release of such substances, impacts associated with the handling, storage, and transport of these hazardous materials would be less than significant.

Mitigation Measures: No mitigation measures are required.

b) *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Less Than Significant With Mitigation Incorporated. One of the means through which human exposure to hazardous substance could occur is through accidental release. Incidents that result in an accidental release of hazardous substance into the environment can cause contamination of soil, surface water, and groundwater, in addition to any toxic fumes that might be generated. If not cleaned up immediately and completely, the hazardous substances can migrate into the soil or enter a local stream or channel causing contamination of soil and water. Human exposure of contaminated soil or water can have potential health effects on a variety of factors, including the nature of the contaminant and the degree of exposure.

Construction associated with development of residential uses at the project site could result in the release hazardous materials into the environment through reasonably foreseeable upset and accident conditions. Information presented in this analysis pertaining to the existing hazardous materials conditions at the project site is based on the *Phase I Environmental Site Assessment, Limited Phase II ESA, and Building Demolition Materials Assessment* (*Hazardous Materials Documentation*), dated March 18, 2011; refer to Appendix 9.2, *Hazardous Materials Documentation*.

Based on the *Hazardous Materials Documentation*, the project site was historically used for agricultural purposes prior to 1938 and was then developed as an automotive dealership in 1968.

Former Underground Storage Tanks

Five 500-gallon underground storage tanks (USTs) were formerly located at the project site and contained waste oil or lubricant oil. These USTs were located in two areas. The eastern UST area contained four 500-gallon waste oil and lubricant oil USTs and the western UST area contained one 500-gallon waste oil UST. All of the USTs were removed in 1990 under the supervision of the Orange County Health Care Agency (OCHCA), the local oversight agency.

During the removal of USTs from the eastern UST area, additional soil was excavated to a depth of approximately 12 feet below ground surface (bgs) in order to remove visibly impacted soil. The OCHCA issued closure letters for all of the USTs removed on February 27, 1991. The Santa Ana Regional Water Quality Control Board Site (RWQCB) also reported case closure. Limited environmental assessment activities conducted as a component of the *Hazardous Materials Documentation* indicate that

residual petroleum hydrocarbon impacts remain in the vicinity of the former USTs. In general, the petroleum hydrocarbons detected in soil near the former USTs are representative of heavier range carbon chain compounds that are not particularly soluble or mobile in the environment. Based on this finding and the absence of detected concentrations of volatile organic compounds (VOCs) in soil samples obtained near these features, the *Hazardous Materials Documentation* concludes that the residual petroleum hydrocarbons do not represent a significant threat to groundwater underlying the site or to future redevelopment and use of the property for residential purposes. Impacts in this regard are less than significant.

Former Underground Hydraulic Lifts

Underground hydraulic lifts were in use into the 1990's, when they were replaced with either aboveground lifts or self-contained "cassette" lifts. Based on the *Hazardous Materials Documentation*, the presence of petroleum hydrocarbons in the vicinity of one hydraulic lift located within the northeastern portion of the maintenance area was noted in 1995. One soil sample was taken, as part of the *Hazardous Materials Documentation*, in the vicinity of this hydraulic lift in order to determine the presence of hydraulic oil in this area. The results of soil sample collected did not indicate the presence of significant concentrations of petroleum hydrocarbons in the vicinity of this hydraulic lift. Based on the results of the limited environmental assessment activities and the more recent use of aboveground and/or "cassette" style hydraulic lifts, the *Hazardous Materials Documentation* concludes that the former hydraulic lifts do not represent a significant threat to groundwater underlying the site or to future redevelopment and use of the property for residential purposes. Impacts in this regard are less than significant.

Storage of On-Site Hazardous Materials

The former Lincoln Mercury car dealership stored and handled hazardous substances (e.g., waste oil and lubricant oil). No USTs are currently located on the project site. Prior to closure, active aboveground storage tanks (ASTs) containing waste oil and lubricant oil were located on-site. Currently, all product and waste products had been drained from the on-site ASTs and shipped off-site by an authorized hazardous waste transportation company and disposed/recycled as appropriate. One clarifier is located on-site in association with the former car wash. According to the *Hazardous Materials Documentation*, the clarifier was cleaned out regularly.

As previously discussed, one historical release of hazardous materials was noted in association with the former USTs, no other spills or releases were reported as part of the *Hazardous Materials Documentation*. Further, the on-site clarifier was regularly cleaned during operations of the car wash. Currently, no hazardous materials are stored/used at the project site. Thus, impacts associated with the storage of on-site hazardous materials are less than significant.

Existing On-Site Structures

A Building Demolition Materials Assessment was performed as part of the *Hazardous Materials Documentation*. This included an evaluation of the potential presence of asbestos-containing building materials, lead-based paint, and other hazardous materials that are typically contained in building equipment that would be removed as part of the

demolition process. The results of the assessment indicate the presence of asbestos containing building materials at concentrations that require their removal in accordance with applicable State and local standards and regulations. Prior to demolition activities, removal and/or abatement of asbestos containing building materials would be required to be conducted by a qualified environmental professional in consultation with the City of Costa Mesa Fire Department (Mitigation Measure HAZ-1). An asbestos and hazardous materials abatement specification would be developed by the qualified environmental professional in order to clearly define the scope and objective of the abatement activities. The abatement specifications would also serve as the basis for establishing performance-based contracting requirements for the licensed abatement contractor. With implementation of the recommended Mitigation Measure HAZ-1, impacts in this regard would be reduced to less than significant levels.

Lead was detected in architectural coatings associated with various metal support columns and in a ceramic sink associated with the employee restroom near the maintenance area. The paint was intact at the time of the assessment (i.e., no flaking, peeling, and delaminating). If the condition of identified lead-based paint becomes less than intact, it must be stabilized or abated prior to demolition activities to prevent environmental contamination and worker exposure from lead paint. If the demolition of the structure impacts the LBP material, paint film stabilization of the peeling and flaking paint would be required prior to initiating demolition activities. Implementation of Mitigation Measure HAZ-1 would require the removal and/or abatement of hazardous materials associated with the existing building materials. With implementation of the recommended Mitigation Measure HAZ-1, impacts in this regard would be reduced to less than significant levels.

Hazardous materials were identified in building equipment associated with the project site. Specifically, the hazardous materials include suspected PCB containing light ballasts, mercury tube lights, radioactive smoke detectors, wall-mounted HVAC units and packaged HVAC units. Equipment containing hazardous materials require disposal in accordance with applicable Federal and State regulations prior to the demolition of the site. With implementation of the recommended Mitigation Measure HAZ-1, impacts in this regard would be reduced to less than significant levels.

Potential On-Site Groundwater Contamination

The potential for on-site groundwater contamination as a result of on-site activities (current and historic) are low. However, on-site contamination may have resulted from adjacent off-site properties that have reported contamination, which include the following:

- Nabers Cadillac/South Coast Buick Pontiac GMC. This regulatory property adjoins the project site to the south. This property includes is a car dealership with maintenance facilities. The storage of hazardous materials via USTs and ASTs have been reported. The USTs have reported releases to the environment. All reported Leaking Underground Storage Tank (LUST) cases are closed, all USTs have been removed, all ASTs are permitted, and waste-oil is shipped from this property via authorized recycler. Thus, it is unlikely that this

off-site property has resulted in a current environmental condition at the project site.

- Nash Auto Sales (Former Plains Home Center). This regulatory property adjoins the project site to the north. The storage of hazardous materials via an UST has been reported. The UST has reported releases to the environment. All LUST cases are closed. Thus, it is unlikely that this off-site property has resulted in a current environmental condition at the project site.

Based on the *Hazardous Materials Documentation*, there is a low likelihood that the project site has been significantly affected by activities and/or releases of hazardous substances from offsite sources or surrounding properties. Thus, impacts in this regard are less than significant.

Potential Agricultural Use-Related Soil Contamination

Based on the *Hazardous Materials Documentation*, the project site was historically used for agricultural purposes prior to 1938, until developed into an automotive dealership in 1968. A combination of several commonly used pesticides (i.e., DDD, DDT, DDE), which are now banned may have been used throughout the historic agricultural portions of the project site (particularly in the 1950s and 1960s). The historical use of agricultural pesticides may have resulted in pesticide residues of certain persistence in soil at concentrations that are considered to be hazardous according to established Federal regulatory levels. The primary concern with historical pesticide residues is human health risk from inadvertent ingestion of contaminated soil, particularly by children.

With implementation of HAZ-2, soil sampling would be required to be conducted on the historic agricultural portions of the project site, as determined by a qualified Phase II specialist, prior to issuance of a building permit. The sampling would determine if pesticide concentrations exceed established regulatory requirements and would identify further site characterization and remedial activities, if necessary. Upon implementation of HAZ-2, impacts pertaining to pesticide residues would be reduced to less than significant levels.

Conclusion

With implementation of Mitigation Measures HAZ-1 and HAZ-2, impacts association with the potential release hazardous materials into the environment through reasonably foreseeable upset and accident conditions during construction would be minimized. However, given the historic use of the project site (e.g., the use and storage of hazardous materials), it is possible that previously unidentified subsurface features and/or soil exhibiting visual or olfactory characteristics that are suggestive of impacts by petroleum hydrocarbons or other hazardous substances may be encountered during demolition and/or site grading activities. Implementation of Mitigation Measure HAZ-3 would require the development of a Construction Contingency Plan. At a minimum, the Construction Contingency Plan would include guidance for handling, segregating, and characterizing subsurface structures and potentially impacted soil generated during the demolition and redevelopment activities, if found. With implementation of Mitigation

Measures HAZ-1 through HAZ-3, impacts pertaining to the upset and accident conditions during construction would be reduced to less than significant levels.

Mitigation Measures:

HAZ-1 Prior to demolition activities, removal and/or abatement of asbestos containing building materials and hazardous materials associated with the existing building materials shall be conducted by a qualified environmental professional in consultation with the City of Costa Mesa Fire Department. An asbestos and hazardous materials abatement specification shall be developed by the qualified environmental professional in order to clearly define the scope and objective of the abatement activities.

HAZ-2 Prior to issuance of a building permit, soil sampling shall occur within the portions of the project site that have historically been utilized for agricultural purposes and may contain pesticide residues in the soil, as determined by a qualified environmental professional with Phase II/site characterization experience. The sampling shall determine if pesticide concentrations exceed established regulatory requirements and shall identify further site characterization and remedial activities, if necessary.

HAZ-3 Prior to issuance of a grading permit, a Construction Contingency Plan shall be developed by a qualified environmental professional in consultation with the City of Costa Mesa Fire Department. At a minimum, the Construction Contingency Plan shall include guidance for handling, segregating, and characterizing subsurface structures and potentially impacted soil generated during the demolition and redevelopment activities, if found, in order to minimize impacts to worker safety and the environment.

c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

Less Than Significant Impact. The nearest school is the Orange Coast College (located at 2701 Fairview Road approximately 0.05 mile east of the project site) and Costa Mesa CA LDS Institute (located at 33 Merrimac Way approximately 0.08 mile southeast of the project site). Proposed uses include residential uses. As previously stated in Response 4.8(a), hazardous materials are not typically associated with residential uses other than minimal amounts of hazardous materials (e.g., the occasional use of pesticides and herbicides for landscape maintenance). Thus, project implementation is not anticipated to emit hazardous emissions or handle significant amounts of hazardous materials within 0.25 mile of an existing or proposed school. Impacts in this regard are less than significant.

Mitigation Measures: No mitigation measures are required.

d) *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

Less Than Significant Impact. Government Code Section 65962.5 requires the Department of Toxic Substances Control (DTSC) and the State Water Resources Control Board (SWRCB) to compile and update a regulatory sites listing (per the criteria of the Section). The State Department of Health Services is also required to compile and update, as appropriate, a list of all public drinking water wells that contain detectable levels of organic contaminants and that are subject to water analysis pursuant to Section 116395 of the Health and Safety Code. Section 65962.5 requires the local enforcement agency, as designated pursuant to Section 18051 of Title 14 of the California Code of Regulations (CCR), to compile, as appropriate, a list of all solid waste disposal facilities from which there is a known migration of hazardous waste.

No public drinking water wells or solid waste facilities, operations, or disposal sites are located within the boundaries of the project site. However, the project site is listed in databases maintained by the SWRCB and DTSC. Based on the *Hazardous Materials Documentation*, the project site was listed on the UST, HIST UST, and LUST databases maintained by the SWRCB, as well as the HIST CORTESE database maintained by the DTSC for the past generation of waste oil and coolant as well as the former presence of USTs (all removed in 1990 and reported case closure with the applicable agency). As analyzed in Response 4.7 b), impacts in this regard are less than significant, as the former release at the project site has received appropriate case closure and no hazardous materials are currently stored at the project site.

Mitigation Measures: No mitigation measures are required.

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?*

Less Than Significant Impact. The project site is located approximately 2.3 miles west of John Wayne Airport (JWA). The Airport Environs Land Use Plan (AELUP) for John Wayne Airport is one of several AELUPs prepared for each of the airports in Orange County. This land use compatibility plan intends, for the twenty year planning future for John Wayne Airport, to safeguard the general welfare of the inhabitants within the vicinity of the airport and to ensure the continued operation of the airport. Specifically, the plan seeks to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities adversely affect navigable airspace. The implementation of this plan forestalls urban encroachment on the airport and allows for its continued operation. This compatibility plan for John Wayne Airport affects the cities of Costa Mesa, Irvine, Newport Beach, Santa Ana, and Tustin, as well as unincorporated areas of the County of Orange. Furthermore, per Federal Aviation Regulation Part 77, Section 77.13(a), notice to the Federal Aviation Administration (FAA) is required for any proposed structure more than 200 feet Above Ground Level (AGL) of its site. Notices to the FAA provide a basis for evaluating project impacts on operational procedures and air navigation. To coincide with the FAA regulation, the ALUC also requires notification of all such proposals, which may result in referral to the ALUC.

The project site is located outside of the John Wayne Airport Impact Zones and the Safety Zone. Further, the proposed structures would not exceed two stories in height. Thus, implementation of the proposed project would not result in a safety hazard for people residing or working in the project area as a result of JWA. Impacts in this regard are less than significant.

Mitigation Measures: No mitigation measures are required.

f) *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*

Less Than Significant Impact. There are no private airstrips located within the vicinity of the proposed project. One heliport is located within one mile of the project site, the Costa Mesa Police Department heliport (located approximately 4,200 feet or 0.79 mile southeast of the project site). The proposed structures would not exceed two stories in height and the project site is located outside of the Helipad Protection Zone. Impacts in this regard are less than significant.

Mitigation Measures: No mitigation measures are required.

g) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Less Than Significant Impact. According to the Safety Element, Figure SAF-9, of the City of Costa Mesa General Plan, the major emergency evacuation routes located in proximity to the project site includes Harbor Boulevard to the west, Adams Avenue to the north, and Fairview Drive to the east. The proposed project would rebuild the sidewalk along Harbor Boulevard. However, the construction activities are not anticipated to be located within Harbor Boulevard. The staging of the equipment for these activities would be located on the project site. Implementation of the project would not require road closure or impediment at Harbor Boulevard, Adams Avenue, or Fairview Drive. Thus, as the proposed project would not impair or physically interfere with any established emergency evacuation routes, impacts in this regard are less than significant.

Mitigation Measures: No mitigation measures are required.

h) *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

No Impact. The City of Costa Mesa General Plan does not identify any fire hazard zones in the City. The project site is located in a dense urban environment and is surrounded by existing development. Additionally, per the new residential code, fall-sprinklers systems are required for all single family homes. There are no wildlands or wildland interface areas located in the project vicinity. Therefore, project implementation would not expose people or structures to a significant risk involving wildland fires.

Mitigation Measures: No mitigation measures are required.

4.9 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?			✓	
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			✓	
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?		✓		
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?		✓		
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		✓		
f. Otherwise substantially degrade water quality?			✓	
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			✓	
h. Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?				✓
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				✓
j. Inundation by seiche, tsunami, or mudflow?				✓
k. Potentially impact storm water runoff from construction activities?			✓	
l. Potentially impact storm water runoff from post-construction activities?			✓	
m. Result in a potential for discharge of storm water pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas, loading docks, or other outdoor work areas?			✓	

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
n. Result in potential discharge of storm water to affect the beneficial uses of receiving waters?				
o. Create the potential for significant changes in flow velocity or volume of storm water runoff to cause environmental harm?		✓		
p. Create significant increases in erosion of the project site or surrounding areas?			✓	

The Hydrology Technical Study and Water Quality Management Plan (WQMP) (RBF Consulting, June 2011), were prepared to address the surface water hydrology and drainage associated with the proposed project; refer to Appendix 9.3. The studies address the primary runoff water quantity, drainage infrastructure requirements, and surface water quality.

The project site's overall terrain is relatively flat, less than one percent. Due to the existing commercial and parking lot land use, the site is overlain with concrete and entirely impervious except for the narrow strips of grass landscaping along Harbor Boulevard and Merrimac Way.

Surface runoff from the site is divided into two areas: the westerly one-third of the project site drains to Harbor Boulevard; the remainder of the site drains to Merrimac Way. The runoff from the westerly side of the site sheet flows from the existing parking lot to a driveway which outlets the flow onto Harbor Boulevard which eventually flows northeast to the Paularino Channel. The easterly portion of the project site sheet flows into a ribbon gutter, which eventually discharges to Merrimac Way through a driveway. The flow continues eastward on Merrimac Way until it enters a catch basin.

a) *Violate any water quality standards or waste discharge requirements?*

Less Than Significant Impact. As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. In California, the NPDES permit program is administered by the State Water Resources Control Board (WRCB). There are nine Regional Water Quality Control Boards (RWQCB), which are responsible for development and enforcement of water quality objectives and implementation plans. The project site is located in the jurisdiction of the Santa Ana RWQCB.

Dischargers whose projects disturb 1.0 or more acres of soil or whose projects disturb less than 1.0 acre but are part of a larger common plan of development that in total disturbs 1.0 or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General

Permit, 2009-0009-DWG, adopted September 2, 2009, effective date July 1, 2010). Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation. The Construction General Permit requires development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s), which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list Best Management Practices (BMPs) the discharger would use to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP must contain:

- A visual monitoring program;
- A chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and
- A sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

Section A of the Construction General Permit describes the elements that must be contained in a SWPPP. The Construction General Permit requirements must be satisfied prior to beginning construction.

Municipal Storm Water Permitting Program

The Municipal Storm Water Permitting Program regulates storm water discharges from municipal separate storm sewer systems (MS4s). MS4 permits were issued in two phases: Under Phase I, for medium (serving between 100,000 and 250,000 people) and large (serving 250,000 people) municipalities, and Phase II, for smaller municipalities. Under Phase I, the RWQCB have adopted NPDES storm water permits for medium and large municipalities, most of which are issued to a group of co-permittees encompassing an entire metropolitan area. The MS4 permits require the discharger to develop and implement a Storm Water Management Plan/Program with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP). MEP is the performance standard specified in Section 402(p) of the Clean Water Act. The management programs specify what BMPs would be used to address certain program areas. On January 18, 2002, the Santa Ana RWQCB issued a municipal storm water NPDES permit to the County of Orange and the 25 incorporated cities within the Santa Ana region, including the City of Costa Mesa.

Orange County Drainage Area Management Plan

The purpose of the Orange County Drainage Area Management Plan (DAMP) is to satisfy NPDES permit conditions for creating and implementing a Storm Water Management Plan/Program to reduce pollutant discharges to the MEP. The City of Costa Mesa is a co-permittee of the Orange County DAMP. The DAMP contains guidelines on structural and nonstructural BMPs for meeting the NPDES goals. The DAMP identifies activities required to implement the minimum control measures required under the Municipal Permit. In order to ensure that construction sites implement the appropriate pollution control measures, the 2003 DAMP details recommended BMPs to be applied to new development and significant redevelopment in Orange County.

Projects are identified as either priority projects or non-priority projects. Priority projects include, but are not limited to:

- Residential development of ten units or more;
- Commercial and industrial development greater than 100,000 sf, including parking area;
- Impervious surface of 2,500 sf or more located within, directly adjacent to (within 200 feet), or discharging directly to receiving waters within Environmentally Sensitive Areas; and
- Parking lots 5,000 sf or more, with 15 parking spaces or more, and potentially exposed to urban stormwater runoff.

The proposed project would be considered a priority project under the 2003 DAMP criteria, since it proposes residential development of ten units or more (i.e., 33 single family units). These regulations require that individual projects:

- Incorporate and implement all source control BMPs (routine structural and routine non-structural) unless not applicable to the project due to project characteristics;
- Document clearly why any applicable source control BMP was not included;
- Incorporate and implement site design BMPs, as appropriate;
- Document the site design BMPs that are included; and
- Either incorporate and implement treatment control BMPs, by including a selection of such BMPs into the project design or participating in or contributing to an acceptable regional or watershed-based program.

The combination of source control, site design, and treatment control BMPs or regional or watershed-based programs must adequately address all identified pollutants and hydrologic conditions of concern. These regulations are designed to ensure that stormwater quality management is considered during a project's planning phase, implemented during construction, and maintained for the life of the project.

City of Costa Mesa Water Pollution Regulations

The City's Water Pollution Regulations (i.e., Article IV, *Water Pollution*, of the CMMC) are intended to improve water quality and comply with federal requirements for the control of urban pollutants to storm water runoff. According to CMMC Section 18-156, all new development and significant redevelopment within the City shall be undertaken in accordance with the DAMP, and conditions and requirements established by City agencies, which are reasonably related to the reduction or elimination of pollutants in storm water runoff from the project site. Further, City agencies are required to review the project plans and impose terms, conditions, and requirements on the project, prior to the issuance of the Grading Permit.

Storm Water Quality

Urban runoff (both dry and wet weather) discharges into storm drains and, in most cases, flows directly to creeks, rivers, lakes, and the ocean. Polluted runoff can have harmful effects on drinking water, recreational water, and wildlife. Urban runoff pollution includes a wide array of environmental, chemical, and biological compounds from both point and non-point sources. In the urban environment, stormwater characteristics depend on site conditions (e.g. land use, impervious cover, pollution prevention, types and amounts of Best Management Practices [BMPs]), rain events (duration, amount of rainfall, intensity, and time between events), soil type and particle sizes, multiple chemical conditions, the amount of vehicular traffic, and atmospheric deposition (EPA 2000). Major pollutants typically found in runoff from urban areas include sediments, nutrients, oxygen-demanding substances, heavy metals, petroleum hydrocarbons, pathogenic, and bacteria.

Urban runoff can be divided into two categories; dry and wet weather urban runoff:

- Dry weather urban runoff occurs when there is no precipitation-generated runoff. Typical sources include landscape irrigation runoff; driveway and sidewalk washing; noncommercial vehicle washing; groundwater seepage; fire flow; potable water line operations and maintenance discharges; and permitted or illegal non storm water discharges.
- Wet weather urban runoff refers collectively to non-point source discharges that result from precipitation events. Wet weather runoff includes stormwater runoff. Stormwater discharges are generated by runoff from land and impervious areas such as paved streets and parking lots, building rooftops.

Wet- and dry-weather runoff typically contains similar pollutants of concerns. However, except for the first flush concentrations following a long period between rainfall, the concentrations levels found in wet weather flows are typically lower than levels found in dry weather flows because the larger wet weather flows dilute the amount of pollution in runoff waters. Most urban stormwater discharges are considered non-point sources and are regulated by an NPDES Municipal General Permit or Construction General Permit.

The project's water quality impacts would be short-term during the earthwork and construction phase, and following construction, prior to the establishment of ground cover, and long-term following completion.

A net effect of development can be to increase pollutant export over naturally occurring conditions. The impact of the higher export can be on the adjacent streams and also on the downstream receiving waters. However, an important consideration in evaluating storm water quality from the project is to assess if it impairs the beneficial use to the receiving waters. Receiving waters can assimilate a limited quantity of various constituent elements, however there are thresholds beyond which the measured amount becomes a pollutant and results in an undesirable impact. For this evaluation, impacts to storm water quality would be considered significant if the project did not attempt to address storm water pollution to the "maximum extent practicable."

Existing Conditions

The project site lacks any measured data on storm water runoff quality. In the absence of site-specific data, expected storm water quality can be qualitatively discussed by relating typical pollutants to specific land uses. The project site recently operated as a former Lincoln Mercury car dealership. The site is comprised entirely of impervious surfaces primarily used associated with the dealership's parking lot and the two structures that were utilized for the office, sales, and repair services. The site is largely void of vegetation with the exception of a few ornamental trees along Harbor Boulevard. The expected existing pollutants in the existing condition storm water runoff from the site include trash, bacteria, metals, oil, and grease.

Under existing conditions, it is unlikely that any of the potential pollutants are removed prior to entering the underground storm drain. Conveying the flows offsite through the parking lot to a driveway which outlets onto Harbor Boulevard street gutters and through a driveway to Merrimac Way street gutters does not provide any potential pollution removal opportunities.

Short-Term Construction

Short-term impacts related to water quality would occur during the earthwork and construction phase, when the potential for erosion, siltation, and sedimentation would be the greatest. Additionally, impacts would occur prior to the establishment of ground cover, when the erosion potential may remain relatively high. Construction of the proposed development has the potential to produce typical pollutants such as nutrients, heavy metals, pesticides and herbicides, toxic chemicals related to construction and cleaning, waste materials including wash water, paints, wood, paper, concrete, food containers, and sanitary wastes, fuel, and lubricants. Impacts to storm water quality would occur from construction and associated earth moving, and increased pollutant loadings would occur immediately offsite.

The project would disturb one or more acres of land surface, thus, would be required to obtain coverage under the NPDES Construction General Permit (Permit). To obtain coverage under the Permit, the project landowner is required to submit a NOI prior to construction activities, and develop and implement a SWPPP. The project would be subject to compliance with the conditions of the City's Local Implementation Plan (LIP) and the DAMP, including implementation of appropriate BMPs to control stormwater runoff so as to prevent any deterioration of water quality. Additionally, the proposed project would be subject to compliance with the City's Water Pollution Regulations, which are intended to improve water quality and comply with federal requirements for the control of urban pollutants to storm water runoff. Following compliance with the requirements of the NPDES, DAMP, and the City's LIMP and Water Pollution Regulations, project implementation would not violate any water quality standards or waste discharge requirements associated with short-term construction activities.

Long-Term Operations

Long-term impacts to water quality would occur following completion of the construction project, when impacts related to sedimentation would decrease markedly post construction, but those associated with urban runoff would increase. As previously

detailed, currently, storm water runoff from the site flows by sheet flow across the site, divided two different directions, and enters the City's storm drain system. As the existing site is mainly a concrete lot, development of the proposed project would decrease impervious areas. However, on-site activities would increase, which would result in impacts to post construction storm water quality. As a result, increased pollutant loading would occur immediately downstream. As the operational activities associated with the recently declined and almost abandoned car dealership have ceased, it is anticipated that post project construction operation of the proposed project would increase trash and debris, nutrients, sediments, bacteria, pesticides, oil and grease, and household hazardous wastes associated with the development. It is unlikely the developed site would produce any suspended solids due to its limited impervious area. The development would be required to implement BMPs to reduce pollutant loadings. Thus, water quality impacts due to site development are potentially significant and would require Mitigation Measures to reduce potentially significant impacts.

As required for the proposed project a Water Quality Management Plan (WQMP) was prepared which identifies specific expected pollutants that would be present in the stormwater flow from the project site after completion of construction. The WQMP incorporates the requirements of DAMP Section 7, including all feasible recommended BMPs. It includes site design, source control, and treatment control BMPs to address the specific pollutants anticipated from the project and project site, and details the specific operation and maintenance of each BMP. The WQMP outlines a routine maintenance schedule for each BMP, in compliance with the DAMP and local regulations. Additionally, the proposed project would be subject to compliance with the City's Water Pollution Regulations. Following compliance with Standard Condition 4.9-1, the requirements of the NPDES, DAMP, and the City's LIP and Water Pollution Regulations, project implementation would not violate any water quality standards or waste discharge requirements associated with long-term operations and potential impacts would be less than a significant level.

Standard Condition

SC 4.9-1 In order to comply with the 2003 DAMP, the proposed project shall prepare a Storm Drain Plan, Stormwater Pollution Prevention Plan (SWPPP), and Water Quality Management Plan (WQMP) conforming to the current National Pollution Discharge Elimination System (NPDES) requirements, prepared by a Licensed Civil Engineer or Environmental Engineer, which shall be submitted to the Department of Public Works for review and approval.

- The SWPPP shall be prepared and updated as needed during the course of construction to satisfy the requirements of each phase of development. The plan shall incorporate all necessary Best Management Practices (BMPs) and other City requirements to eliminate polluted runoff until all construction work for the project is completed. The SWPPP shall include treatment and disposal of all dewatering operation flows, and for nuisance flows during construction.

- A WQMP shall be maintained updated as needed to satisfy the requirements of the adopted NPDES program. The plan shall ensure that the existing water quality measures for all improved phases of the project are adhered to.

- Location of the BMPs shall not be within the public right-of-way.

Mitigation Measures: No mitigation measures are required.

b) *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

Less Than Significant Impact. The City of Costa Mesa does not serve as the main spreading basin for groundwater recharge. Depending on the groundwater table at the project site, groundwater could be encountered during pile driving, dewatering, and other construction activities. However, the displaced/removed volume from these activities would not be substantial relative to the Santa Ana Basin's water volume. Therefore, project construction activities would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge.

Project implementation would replace a former car dealership, which is almost entirely covered with impervious surface, with a residential development, thereby, decreasing the site's impervious area. As such, the project site's change in impervious area would not interfere with groundwater recharge.

Mitigation Measures: No mitigation measures are required.

c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?*

Less Than Significant With Mitigation Incorporated. Soil disturbance would temporarily occur during project construction due to earth-moving activities such as excavation and trenching for foundations and utilities, soil compaction and moving, cut and fill activities, and grading. Disturbed soils would be susceptible to high rates of erosion from wind and rain, resulting in sediment transport via stormwater runoff from the project site.

Currently, the site's storm water runoff flows by sheet flow across the site and enters the City's storm drain system. Project implementation would result in alterations to site drainage due to grading and a decrease in impervious area. The proposed condition would contain approximately 30 percent more pervious area than the existing condition; refer to Response 4.9(d), below for additional details on proposed conditions site drainage.

Compliance with Standard Condition 4.9-1 and Mitigation Measure HYD-1, would reduce the volume of sediment-laden runoff discharging from the site. Therefore, project implementation would not substantially alter the existing drainage pattern of the site such that substantial erosion or siltation would occur.

Mitigation Measures:

HYD-1 Prior to the issuance of any Grading Permit, the Applicant shall:

- Prepare a detailed hydrology study, approved by the City Engineer.
- Analyze, design, and construct the new storm drain between the project site and the existing 4.5-foot-high by eight-foot-wide RCB box.
- Design all storm drain facilities, approved by the City Engineer, for 25-year storm event protection
- All storm drain in public right-of-way shall be a minimum of 24 inches by City of Costa Mesa requirements and will be designed in accordance with the Orange County Local Drainage Manual including a minimum spacing between manholes of 300 feet.

d) *Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?*

Less Than Significant With Mitigation Incorporated. The purpose of the existing conditions evaluation establishes a baseline for comparison of the pre-project and the post-project conditions. Baseline conditions investigated include: land use and hydrology.

Existing Hydrologic Conditions

The project site is located within the Newport Bay Watershed within the Central County Watershed Management Area (OC Watershed F). The existing on-site watershed is divided into two sub-watersheds: the area draining to Harbor Boulevard and the area draining to Merrimac Way; refer to Exhibit 4.9-1: *Existing Conditions Hydrology Map*. The runoff tributary to Harbor Boulevard (Watershed B) sheet flows from the parking lot to a driveway that outlets the flow onto Harbor Boulevard. The flow continues northeast to F03 (Paularino Channel), which is eventually tributary to the Santa Ana Delhi Channel. From the Santa Ana Delhi Channel, the additional receiving waters downstream to the site are the Newport Bay, Lower, and Pacific Ocean (Outlet).

The runoff tributary to Merrimac Way sheet flows into a ribbon gutter, which eventually discharges to Merrimac Way through a driveway. The flow then continues eastward on Merrimac Way until it enters a catch basin which is tributary to an existing 4.5'x8' Reinforced Concrete Box (RCB). The RCB is eventually tributary to E03 upstream of Pinecreek Drive.

Approximately 90 percent of the total site area is currently impervious. The remaining amount (10 percent pervious) represents few ornamental trees.

Hydrology

Hydrologic calculations to evaluate surface runoff associated with 10-year, 25-year, and 100-year design storm frequencies from the project site were performed using the Rational Method. The time of concentration was determined using the Orange County Hydrology Manual.

A 2-year storm was analyzed for runoff flow rate in cubic feet per second (cfs), volume, and time of concentration for the overall site to satisfy the water quality Hydrologic Conditions of Concern Analysis; refer to Table 4.9-1, Existing Condition 2-year Analysis Summary.

Table 4.9-1
Existing Condition 2-year Analysis Summary

Flowrate (cfs)	Volume (Acre-feet)	Time of Concentration (Minutes)
4.82	0.45	11.72

Rational Method

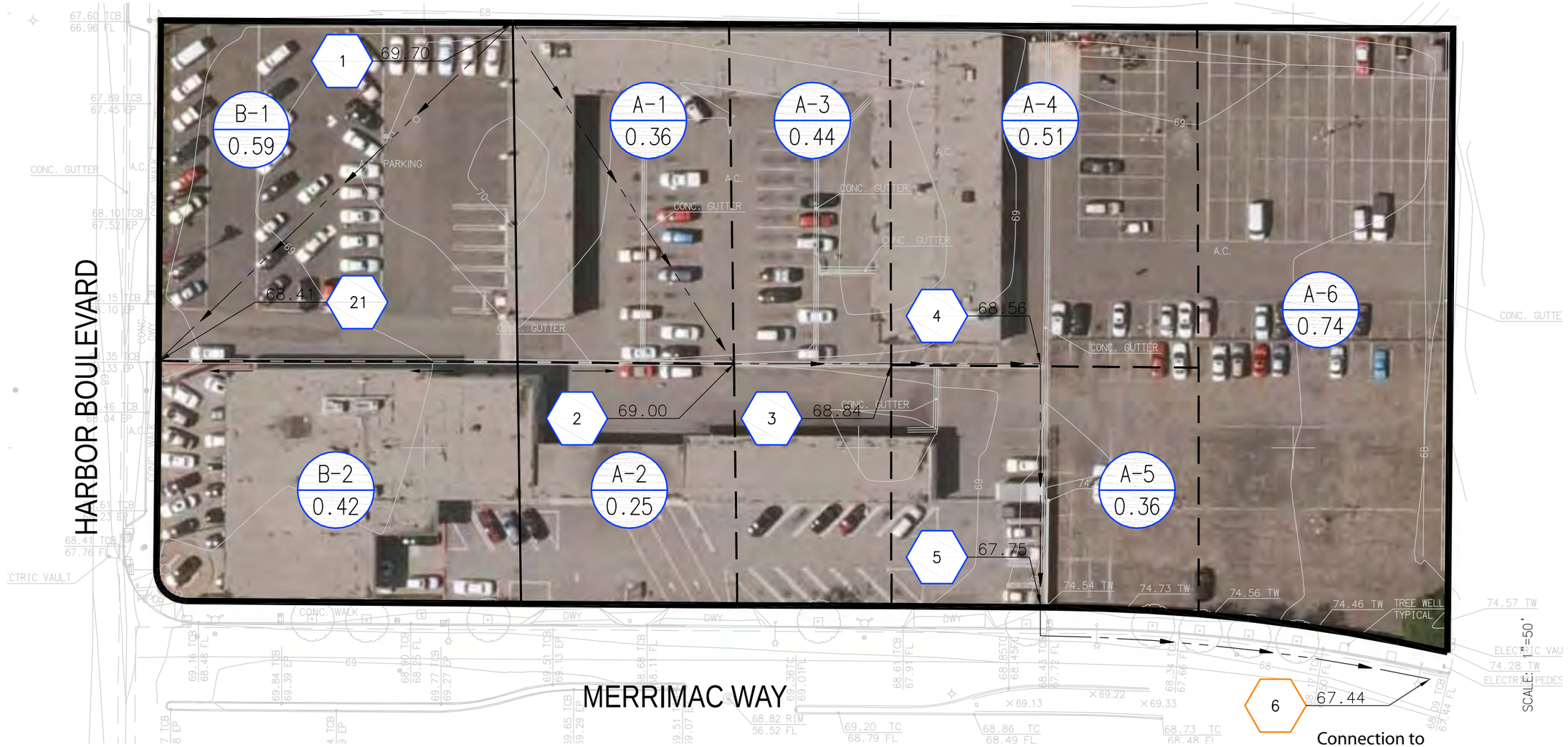
The hydrologic calculations to determine 10-, 25-, and 100-year high confidence design discharges were performed using the County of Orange Rational Method from the *County of Orange Hydrology Manual*, dated October 1986. The Rational Method is described in detail in Appendix 9.3.

Existing Condition Surface Water Hydrology

Approximately 90 percent of the project site is currently impervious. The hydrology map for the existing condition rational method model is shown in Exhibit 4.9-1. The results of the rational method analysis are summarized in the Table 4.9-2, *Existing Condition Hydrology Summary*, and the detailed output for the existing condition analyses are included in Appendix 9.3.

Table 4.9-2
Existing Condition Hydrology Summary

Sub-Watershed	Node	Area (acres)	Total 10-Year Flow Rate Exiting the Site (cfs)	Total 25-Year Flow Rate Exiting the Site (cfs)	Total 100-Year Flow Rate Exiting the Site (cfs)
A	**6**	2.67	6.12	7.37	9.53
B	**21**	1.01	2.78	3.48	4.46



Connection to Existing 4.5'Hx8'W Reinforced Concrete Box (500+/- Feet)

LEGEND

- DRAINAGE BOUNDARY
- SUBAREA BOUNDARY
- FLOW PATH
- B-12 / 11.3 — SUBAREA DESIGNATION / AREA (ACRES)
- 1000 — HYDROLOGY NODE

RBF CONSULTING

0 25 50 Feet

6/08/11 JN 10-108150

2626 HARBOR BOULEVARD
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Existing Conditions Hydrology Map

Exhibit 4.9-1

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Proposed Condition Surface Water Hydrology

The following is an analysis of the proposed project evaluation, which is then compared to the existing conditions analysis, to determine impacts associated with development of the proposed project. The proposed conditions analysis includes land use and assumed roadway drainage.

Proposed Condition Watershed Land Use

The proposed project involves the development of 33 single-family units. To analyze the proposed project condition, the project site was considered one land use: 8-10 dwelling units per acre.

Proposed Condition Watershed Description

The proposed condition watershed would be altered as compared to the existing condition watershed. The proposed condition would increase pervious area by 30 percent. Under the proposed condition, the project site would be 60 percent impervious as compared with the existing condition of approximately 90 percent impervious; refer to Table 4.9-3, *Proposed Land Use*.

Under the proposed condition, the watershed would shift from the existing two sub-watersheds A and B to one sub-watershed "C"; refer to Exhibit 4.9-2, Proposed *Condition Hydrology Map*. The proposed sub-watershed would be tributary to a new proposed storm drain pipe that would connect the new on-site storm drain directly to the existing 4.5-foot-high by eight-foot-wide box (box) under Merrimac Way (which is the existing discharge point of Existing Condition Watershed A). As a result of the altered watershed configuration, combining both existing Sub-watershed A and Sub-Watershed B, the proposed watershed tributary to the box would increase slightly. The proposed on site storm drain system consist of gutters, catch basins, and storm drains to capture the on-site flows and direct the flows to the new storm drain extension, and ultimately the box in Merrimac Way. Construction of the storm drain would reduce potential impacts associated with the proposed project Sub-Watershed to a less than significant level.

Table 4.9-3
Proposed Land Use

Sub-Watershed	Node	Total Area	
		(ac)	% Impervious
C	50	3.6	60%

Proposed Condition Hydrology

Project hydrology was completed by RBF Consulting to determine the local impacts that the proposed development would have on runoff. Hydrologic calculations to evaluate surface runoff associated with 10-year, 25-year, and 100-year design storm frequencies were performed using the Rational Method consistent with the *Orange County Hydrology Manual*.

Proposed Condition Analysis and Results

The results of the watershed analysis for the proposed project generated the resulting peak discharges at the downstream project boundary and at the location where the flow enters the underground storm drain. Results of the proposed 25-year and 100-year hydrologic analyses are summarized in Table 4.9-4, *Proposed Condition 2-year Analysis Summary*.

A 2-year storm was analyzed for runoff flow rate, volume, and time of concentration for the overall site to satisfy the water quality Hydrologic Conditions of Concern Analysis; refer to Table 4.9-5, *Proposed Condition Hydrology Summary*.

Table 4.9-4
Proposed Condition 2-year Analysis Summary

Flowrate (cfs)	Volume (Acre-feet)	Time of Concentration (Minutes)
4.34	0.27	12.53

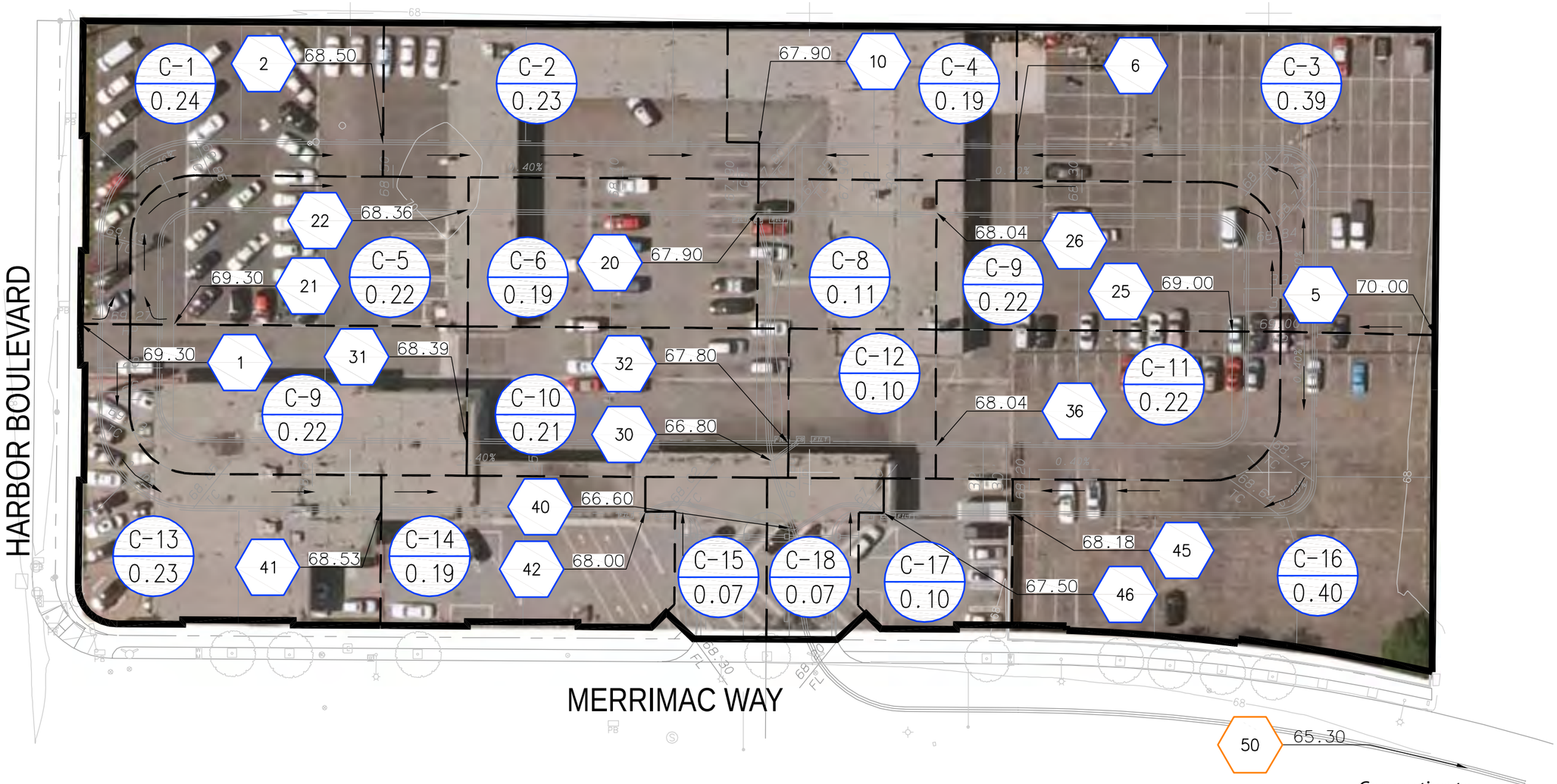
Table 4.9-5
Proposed Condition Hydrology Summary

Sub-Watershed	Node	Area (acres)	Total 10-year Flow Rate (cfs)	Total 25-year Flow Rate (cfs)	Total 100-year Flowrate (cfs)
C	**50**	3.60	8.16	9.83	12.68

The results of the 2-year impact analysis show decreases in flowrate and volume, with an increase in Time of Concentration. The proposed land use would bring the hydrology of the 3.68 acres closer to a natural condition due to the increase in pervious area. The impacts of this change on the Santa Ana Delhi would be negligible as the project only represents 0.033 percent (3.68/11,071 acres) of the watershed.

Proposed Condition Drainage

As previously stated under the proposed condition, the watershed delineations would change from a two sub-watershed configuration to a one sub-watershed configuration as a result of the proposed project. In addition, there would be a 30 percent decrease in impervious areas due to the replacement of the existing hardscape with landscape; refer to Table 4.9-6, *Comparison of Drainage Are Impacts*. As indicated in Table 4.9-7, *Comparison Hydrology,* implementation of the proposed project would result in a slight increase, approximately 3.15 cfs, in the flow to the storm drain in Merrimac Way (previously referred to as the storm drain extension to the box under Merrimac Way). However, as a result of the decrease in impervious surface the overall flow from the project site would be decreased by 0.74 cfs, 1.0 cfs, and 1.31 cfs under the 10-year Storm, 25-year Storm, and 100-year Storm; respectively. As indicated in Table 4.9-7, there is no flow rate for the Existing Condition Sub-Watershed B under the proposed condition. As such, development of the proposed project would not substantially alter the drainage patterns in comparison to existing conditions and would not impact downstream hydrology. Therefore, this impact is considered less than significant.



LEGEND

- DRAINAGE BOUNDARY
- SUBAREA BOUNDARY
- FLOW PATH
- B-12 / 11.3 — SUBAREA DESIGNATION / AREA (ACRES)
- 1000 — HYDROLOGY NODE

RBF CONSULTING

0 25 50 Feet

6/08/11 JN 10-108150

2626 HARBOR BOULEVARD
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Proposed Conditions Hydrology Map

Exhibit 4.9-2

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Table 4.9-6
Comparison of Drainage Area Impacts

Sub-Watershed	Existing Conditions		Proposed Conditions		Comparison	
	Area (ac)	% Impervious	Area (ac)	% Impervious	D Area (ac)	D %Impervious
A/C	2.67	90	3.68	60	1.07	-30%
B	1.01	90	0	0	-1.07	

Table 4.9-7
Comparison Hydrology

Sub-Watershed	10-Year Storm			25-Year Storm			100-Year Storm		
	Existing Flowrate (cfs)	Proposed Flowrate (cfs)	D Flowrate	Existing Flowrate (cfs)	Proposed Flowrate (cfs)	D Flowrate	Existing Flowrate (cfs)	Proposed Flowrate (cfs)	D Flowrate
A/C	6.12	8.16	+2.04	7.37	9.83	**+2.46**	**9.53**	**12.68**	**+3.15**
B	2.78	0	-2.78	3.48	0	**-3.46**	**4.46**	**0**	**-4.46**
Total	8.90	8.16	-0.74	10.85	9.83	**-1.0**	**13.99**	**12.68**	**-1.31**

Mitigation Measures: Refer to Mitigation Measure HYD-1.

e) *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

Less Than Significant With Mitigation Incorporated. Refer to Responses 4.9(a) and 4.9(c).

Mitigation Measures: Refer to Mitigation Measures HYD-1.

f) *Otherwise substantially degrade water quality?*

Less Than Significant Impact. The proposed project involves a single-family development, which due to its scope and nature, would not otherwise substantially degrade water quality. Refer to Response 4.9(a).

Mitigation Measures: No mitigation measures are required.

g) *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

Less Than Significant Impact. The City of Costa Mesa is a participant in the National Flood Insurance Program (NFIP). Communities participating in the NFIP must adopt and enforce minimum floodplain management standards, including identification of flood hazards and flooding risks. Participation in the NFIP allows communities to purchase low

cost insurance protection against losses from flooding. The project involves development of 33 single-family units. The project site is located on Flood Insurance Rate Map (FIRM) Map Number 06059C0266J (September 26, 2008). The site is located in FEMA Zone X (Other Flood Areas), which corresponds to areas outside the 0.2 percent annual chance floodplain. The FIRM indicates that there is no existing flood hazard within the project site. FEMA Flood Zone X is a moderate to low risk flooding area where, although the above mentioned insurance is available to property owners, it is not required. Therefore, project implementation would not place housing within a 100-year flood hazard area.

Mitigation Measures: No mitigation measures are required.

h) *Place within a 100-year flood hazard area structures, which would impede or redirect flood flows.*

No Impact. The project site is not located within a 100-year flood hazard area; refer also to Response 4.9(g).

Mitigation Measures: No mitigation measures are required.

i) *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*

No Impact. The project site is not located in the flood inundation area of the Prado Dam or the Santiago Dam. Therefore, project implementation would not expose people or structures to a significant risk involving flooding as a result of the failure of a levee or dam.

Mitigation Measures: No mitigation measures are required.

j) *Inundation by seiche, tsunami, or mudflow?*

No Impact. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. A tsunami is a great sea wave, commonly referred to as a tidal wave, produced by a significant undersea disturbance such as tectonic displacement of a sea floor associated with large, shallow earthquakes. Mudflows result from the downslope movement of soil and/or rock under the influence of gravity.

The project site is located approximately nine miles from the Pacific Ocean and 130 feet above sea level, which is a sufficient distance so as not to be subject to tsunami impacts. The project site is not in the vicinity of a reservoir, harbor, lake, or storage tank capable of creating a seiche. The City of Costa Mesa is located on nearly flat surfaces and the project site is not positioned downslope from an area of potential mudflow. Therefore, the proposed project would not be subject to mudflow.

Mitigation Measures: No mitigation measures are required.

k) *Potentially impact storm water runoff from construction activities?*

Less Than Significant Impact. As previously discussed under Response 4.9 a), the proposed project has prepared a WQMP that incorporates the requirements of DAMP Section 7, including all feasible recommended BMPs. The BMPs include site design, source control, and treatment control BMPs to address the specific pollutants anticipated from the project and project site, related both to construction and operational activities, and details the specific operation and maintenance of each BMP. The WQMP outlines a routine maintenance schedule for each BMP, in compliance with the DAMP and local regulations. Additionally, the proposed project would be subject to compliance with the City's Water Pollution Regulations. Following compliance with the requirements of the NPDES, DAMP, and the City's LIP and Water Pollution Regulations, project implementation would not violate any water quality standards or waste discharge requirements associated with construction operations. Also, refer to Standard Condition 4.9-1.

Mitigation Measures: No mitigation measures are required.

l) *Potentially impact storm water runoff from post-construction activities?*

Less Than Significant Impact. As previously discussed under Response 4.9 a), the proposed project has prepared a WQMP that incorporates the requirements of DAMP Section 7, including all feasible recommended BMPs. The BMPs includes site design, source control, and treatment control BMPs to address the specific pollutants anticipated from the project and project site, related both to construction and operational activities, and details the specific operation and maintenance of each BMP. The WQMP outlines a routine maintenance schedule for each BMP, in compliance with the DAMP and local regulations. Additionally, the proposed project would be subject to compliance with the City's Water Pollution Regulations. Following compliance with the requirements of the NPDES, DAMP, and the City's LIP and Water Pollution Regulations, project implementation would not violate any water quality standards or waste discharge requirements associated with post-construction operations. Also, refer to Standard Condition 4.9-1.

Mitigation Measures: No mitigation measures are required.

m) *Result in a potential for discharge of storm water pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas, loading docks, or other outdoor work areas?*

Less Than Significant Impact. The proposed project consists of 33 single-family residential units and does not propose the use of hazardous materials. However, the inadvertent discharge of storm water pollutants resulting from the washing of private vehicles, and other household uses may result with project implementation. However, the WQMP has incorporated BMPs that would reduce the release of these pollutants into the City's storm drain system; refer to Response 4.9 a).

Mitigation Measures: No mitigation measures are required.

n) *Result in potential discharge of storm water to affect the beneficial uses of receiving waters?*

Less Than Significant Impact. The potential for the discharge of storm water that would affect the beneficial uses of receiving water, (specific to the proposed project; Newport Bay, Lower and the Pacific Ocean) would be reduced with the implementation of BMPs during all phases of the project (site design; construction; and operation); refer to Response 4.9 a).

Mitigation Measures: No mitigation measures are required.

o) *Create the potential for significant changes in flow velocity or volume of storm water runoff to cause environmental harm?*

Less Than Significant With Mitigation Incorporated. Refer to Response 4.9 d).

Mitigation Measures: Refer to Mitigation Measures HYD-1.

p) *Create significant increases in erosion of the project site or surrounding areas?*

Less Than Significant Impact. The proposed project would result in an increase of pervious area by approximately 30 percent. This increase would be associated with the removal of existing hardscape associated with the former car dealership on site and replacing this surface area with landscaping. The increase in landscaping would not expose areas of unvegetated land, and therefore, would not create an increase in the potential for erosion on or off the project site. As such, impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

4.10 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Physically divide an established community?				✓
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			✓	
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				✓

a) *Physically divide an established community?*

No Impact. The project site is located on a 3.7-acre vacant commercial property, formerly occupied by the Lincoln Mercury auto dealership. The project site is a corner property facing Harbor Boulevard and Merrimac Way adjacent to an apartment complex and a commercial property. Thus, the proposed project does not physically divide an established community nor create residential development that is not in proximity to public schools/parks. No impacts related to this issue would result from implementation of the proposed project, and no mitigation measures are proposed.

Mitigation Measures: No mitigation measures are required.

b) *Conflict with applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*

Less Than Significant Impact. The Land Use Element of the General Plan directs long-range development in the City by indicating the location and extent of development to be allowed. The General Plan sets forth land use goals, policies, and objectives that guide new development. A general plan amendment to reclassify the land use designation from General Commercial to Medium Density Residential is required in addition to a rezone of the project site from C1 and P to R2-MD (Medium Density). Exhibit 4.10-1, *General Plan Map* and Exhibit 4.10-2, *Zoning Map*, depict the General Plan and Zoning map reflecting the proposed new land use designation and rezone of the property. The current General Plan land use designation does not allow residential development; however, this area of Harbor Boulevard has been historically suitable for residential development as evidenced by the existing Harbor Village apartments, Richmond American homes, the College Park residential community and the recent approval of a senior housing complex across Harbor Boulevard. In addition, the County has recently prepared a draft Sustainable Communities Strategy (OCSCS) in compliance with the requirements of Senate Bill 375. SB 375 required a reduction in green house gas at

Source: City of Costa Mesa

Source: City of Costa Mesa

regional levels by reducing vehicle miles traveled through integration of transportation systems and housing. The OCSCS refers to the Harbor Boulevard as a major transit bus route and encourages in-fill housing development along this corridor.

General Plan Amendment GP-11-01

Even though the proposed development requires an amendment to the General Plan land use plan, it meets the goals and intent of the City's General Plan and regional land use plans as follows:

1. General Plan Land Use Objective LU-1A.4. *Strongly encourage the development of low-density residential uses and owner-occupied housing where feasible to improve the balance between rental and ownership housing opportunities.* The project offers three types of plans for small detached units proposed for ownership housing. This type of development provides a great opportunity for first time home buyers.

2. General Plan Land Use Objective LU-1E.1. *Building densities/intensities for proposed new development projects shall not exceed the trip budget for applicable land use classifications, as identified in the Land Use Element.* The proposed project is forecast to generate approximately 316 daily trips, which include approximately 24 a.m. peak hour trips and approximately 33 p.m. peak hour trips. The Harbor Boulevard/Merrimac Way study intersection is currently operating at an acceptable LOS (LOS D or better) and is forecast to continue to operate at an acceptable LOS with the addition of project-generated trips according to City of Costa Mesa performance criteria for forecast existing plus project conditions. No significant traffic impacts for forecast to occur as a result of the proposed project based on City of Costa Mesa established thresholds of significance for existing plus project conditions. It should also be noted that the proposed residential development reduces trip generation by 80 percent in comparison with the most recent existing commercial use of the site.

3. General Plan Land Use Objective LU-1F.4. *Ensure that residential densities can be supported by the infrastructure and that high-density residential areas are not permitted in areas, which cause incompatibility with existing single-family areas.* The proposed development is medium density residential with a maximum 12 du/acre density that can be supported with the existing infrastructure and is compatible with the adjacent residential uses.

4. General Plan Land Use Objective HOU-3.1. *Encourage the conversion of existing marginal or vacant commercial and/or industrial land to residential, where feasible and consistent with environmental conditions that are suitable for new residential development.* The project site is a vacant auto dealership on Harbor Boulevard. This area of Harbor Boulevard has been historically suitable for residential development as evidenced by the existing Harbor Village apartments, Richmond American homes, the College Park residential community and the recent approval of a senior housing complex across Harbor Boulevard. Development of the site would provide homeownership opportunities in a medium density setting in proximity to freeways and transit services which is very desirable in Orange County.

As part of the proposed General Plan Amendment, General Plan Table LU-1 (Land Use Designations) would be modified to reflect the project's amended General Plan Land Use designation. The total acreage of Medium-Density Residential would increase from 808.0 to 811.7 acres and the total acreage of General Commercial would decrease from 625.9 to 622.2-acres.

Rezone R-11-01

The proposed project involves a zoning ordinance for a rezone of the project site. The purpose of the rezone is to allow development of a medium density residential project. The project site is zoned *C1 (Local Business District)* which is intended to meet the local business needs of the community by providing a wide range of goods and services in a variety of locations throughout the City. The permitted and conditional uses as well as development standards are aimed toward reducing impacts on surrounding properties, especially in those areas where residential uses are in the vicinity. The project is also zoned *P (Off-Street Parking District),* which is intended to allow parking lots, and buildings incidental to the operation of a parking lot. The existing C1 and P zoning districts do not allow residential development.

The intent of the rezone is to allow for single family residential development. The site is adjacent to a commercial property and a multiple family residential project to the north; however, it is separated by Harbor Boulevard and Merrimac Way from other commercial uses. In addition, the configuration of the site design with the site entrance along Merrimac Way (a local street) makes it suitable for residential development (refer to Exhibit 4.10-2, *Zoning Map)*.

Environmental Versus Policy Issues

There are no environmental impacts associated with the request for a General Plan Amendment and Rezone of the property for residential development because:

If residential uses were allowed, the proposed project is considered appropriate and compatible with the character of the community. The design includes small detached structures with architectural articulation and sufficient street landscaping. No variance from the zoning regulations is required.

If the General Plan Amendment and rezone are approved, the proposed 33-unit development at a maximum 12 du/acre is consistent with the medium density residential development standards and the density limits of the medium density residential land use and R2-MD zoning designation.

The project provides housing within proximity to bus transit service, replaces a marginal commercial use with ownership housing, and provides better housing opportunities for first time home buyers. In addition, a residential project at this location would improve the overall housing/job balance in the community, provide housing opportunity in close proximity to a major transit route and incrementally decreases trip generation on Harbor Boulevard.

Design and Density of Proposed Project in Conformance with General Plan

The proposed design and density of the project are in conformance with the medium density General Plan land use designation. In addition, the proposed project achieves several of the housing goals/policies of the 2000 General Plan related to new construction of ownership housing.

The proposed rezone request involves both environmental and policy issues. These policy issues do not relate to the proposed residential design or land use intensity which are considered compatible with the existing land uses and in conformance with General Plan policies. Instead, the most significant policy issue is the suitability of the project site for residential development.

The environmental analysis finds that there are no significant environmental impacts that cannot be mitigated to below a level of significance. The larger policy decision relates to whether or not the City of Costa Mesa finds that the proposed rezone strengthens and reinforces the City's land use vision for the overall area. The City's policymaking are beyond the scope of this environmental analysis which emphasizes anticipated physical environmental impacts. However, the environmental analysis will serve as an integral component in the City's deliberation of the required discretionary approvals (i.e. general plan amendment, rezone, Master Plan).

City approval of the proposed project would resolve the General Plan and Zoning inconsistency to allow the medium density residential development to be a complementary land use to the area. Without the General Plan Amendment and Rezone, the proposed project could not proceed. Compliance with Standard Condition 4.10-1, requirements for processing planning applications, would eliminate any impacts related to consistency with land use policies. Therefore, no mitigation related to this issue is required.

Standard Condition

SC 4.10-1 The Applicant shall submit a planning application for all discretionary approvals associated with the proposed project in accordance with Chapter III, Planning Applications, of the Costa Mesa Zoning Code. This code requirement specifies that the Applicant/Developer shall apply and obtain approval of General Plan Amendment, rezone, master plan, and tentative tract map for the proposed residential development from the City of Costa Mesa prior to submission of 100% complete construction plans for building plan check.

Mitigation Measures: No mitigation measures are required.

c) *Conflict with any applicable habitat conservation plan or natural community conservation plan?*

No Impact. The proposed project is not within or near any applicable conservation plan or natural community conservation plan, and no impacts related to this issue would occur. Therefore, no mitigation measures are required.

Mitigation Measures: No mitigation measures are required.

4.11 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				✓

a) *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

No Impact. The Safety Element of the City's General Plan does not identify any mineral resources of regional or statewide value within the project area; therefore, project implementation would not result in the loss of availability of a known mineral resource that would be of value to the region or the state.

Mitigation Measures: No mitigation measures are required.

b) *Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

No Impact. Refer to Response 4.10(a). The project site is not a locally important mineral resource recovery site delineated on the City's General Plan or other relevant plan. Therefore, project implementation would result in no impact in this regard.

Mitigation Measures: No mitigation measures are required.

4.12 NOISE

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		✓		
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			✓	
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		✓		
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		✓		
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				✓

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas or conflict with the adopted environmental plans and goals of the community in which it is located. The applicable noise standards governing the project site are the criteria in the Noise Element of the General Plan and the Noise Ordinance.

The City Noise Ordinance establishes outdoor and indoor noise standards for various land uses. The ordinance is designed to control unnecessary, excessive, and annoying sounds generated on one piece of property from impacting an adjacent property, and to protect residential areas from noise sources and transportation-related noises. The noise standards specified in the City's Noise Element for residential land use are that the exterior noise exposure level shall not exceed 65 dBA CNEL, and the interior noise exposure level shall not exceed 45 dBA CNEL for the daytime period (7:00 a.m. to 11:00 p.m.). Between the hours of 11:00 p.m. and 7:00 a.m., the noise standards are 5 dBA more stringent for exterior areas and 10 dBA more stringent for indoor areas. The interior noise level requirement specifies closed windows and mechanical ventilation systems. The City's Noise Ordinance exempts several categories of noise sources, including construction activities that take place between the hours of 7:00 a.m. and 8:00 p.m. Monday through Saturday, excluding federal holidays.

Existing Noise Environment. The project site is located at 2626 Harbor Boulevard, at the northeast corner of the intersections of Harbor Boulevard and Merrimac Way. The primary sources of noise in the project area is traffic noise along Harbor Boulevard.

a) *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Less Than Significant With Mitigation Incorporated.

SHORT-TERM CONSTRUCTION

Construction activities are generally temporary and short in duration, resulting in periodic increases in the ambient noise environment. Table 4.12-1, *Maximum Noise Levels Generated by Construction Equipment*, indicates the anticipated noise levels of construction equipment based on a distance of 50 feet between the equipment and noise receptor. It should be noted that the noise levels identified in Table 4.12-1 are maximum sound levels (L_{max}), which are the highest individual sound occurring at an individual time period. Operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three or four minutes at lower power settings.

Table 4.12-1
Maximum Noise Levels Generated by Construction Equipment

Type of Equipment	Acoustical Use Factor[1]	L_{max} at 50 Feet (dBA)
Cement/Mortar Mixer	40	79
Concrete/Industrial Saw	20	90
Crane	16	81
Dozer	40	82
Excavator	40	81
Forklift	40	79
Generator	50	81
Grader	40	85
Other Equipment (greater than five horse power)	50	85
Paver	50	77
Roller	20	80
Tractor	40	84
Truck	40	80
Welder	40	73

Note:
1 – Acoustical use factor (percent): Estimates the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

Source: Federal Highway Administration, *Roadway Construction Noise Model (FHWA-HEP-05-054),* dated January 2006.

Construction would occur throughout the project site and would not be concentrated in or confined to one specific area of the project site. Therefore, construction noise would be acoustically dispersed throughout the project site and not concentrated in one area near adjacent sensitive uses (i.e., residential uses adjacent to the project site). Pursuant to the City of Costa Mesa *Municipal Code*, all construction activities may occur between the hours of 7:00 AM and 7:00 PM, Monday through Friday, and 9:00 AM and 6:00 PM on Saturdays. Exterior construction activities are prohibited on Sundays and City holidays.

Implementation of Mitigation Measure NOI-1 would further minimize impacts from construction noise as it requires construction equipment to be equipped with properly operating and maintained mufflers and other state required noise attenuation devices. The required noise disturbance coordinator would ensure that construction noise levels comply with the City's limits. It should be noted that nighttime construction would not occur. Thus, a less than significant noise impact would result from construction activities.

OPERATIONAL NOISE SOURCES

The Federal Highway Administration (FHWA) TNM 2.5 model was used to evaluate the future with project traffic noise levels. The future project conditions were modeled with the residential sensitive receptors located adjacent to Harbor Boulevard; resulting in a total of 8 modeled receptor locations (Lots 14, 15, 16, 17, 28, 29, 30, and 31). Exhibit 4.12-1, *Required Noise Mitigation*, depicts the lot numbers where the receptors were modeled. Table 4.12-2, *On-Site Noise Levels*, illustrates the anticipated noise levels at each on-site sensitive receptor.

As indicated in Table 4.12-2, on-site noise levels would exceed the City's noise standard of 65 dBA. In order to mitigate future traffic noise levels, a sound barrier would be required along the site's westerly perimeter (residential units along Harbor Boulevard). The sound wall would be required to be a minimum of 7 feet high from finished grade. The sound wall, as required in Mitigation Measure NOI-2, would reduce exterior noise levels due to arterial traffic to a less than significant level; refer to Exhibit 4.12-1, and Exhibit 4.12-2, *Noise Contour Map*. Off-site traffic noise impacts would be less than significant as the project would only generate 316 daily trips, which is a small percentage of the traffic volumes in the study area and would not create a perceptible increase in traffic noise.

Table 4.12-2
On-Site Noise Levels

Lot Number[1]	Exterior Noise Level Without Mitigation[2] (dBA CNEL)	Mitigated Exterior Noise Level[2] (dBA CNEL)	Mitigated Interior Noise Level[3] (dBA CNEL)
14	65.1	60.4	40.4
15	69.2	60.5	40.5
16	69.6	61.3	41.3
17	64.1	56.0	36.0
29	69.8	61.5	41.5
28	65.7	57.2	37.2
30	71.8	63.3	43.3
31	66.3	63.7	43.7

Notes:
1. Refer to Exhibit 4.12-1, *Required Noise Mitigation* for a depiction of each lot location and orientation in regards to Harbor Boulevard.
2. It should be noted that the TNM 2.5 model has a tolerance standard deviation of +/-0.5 dBA.
3. A 20 dBA noise attenuation rate was utilized to determine the interior noise standards.

Mitigation Measures:

NOI-1 Prior to Grading Permit issuance, the Contractor shall demonstrate, to the satisfaction of the City of Costa Mesa Public Works Department that the project complies with the following:

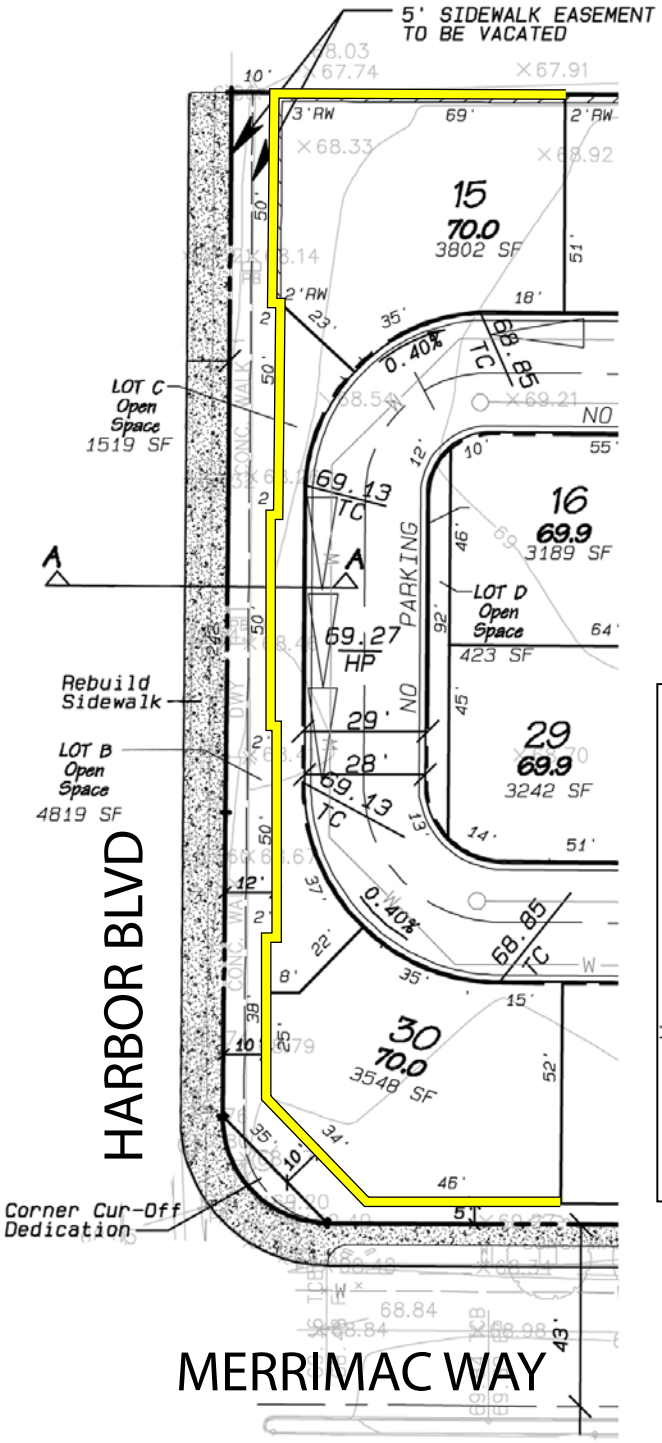
- Construction contracts specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices.
- Construction haul routes shall be designed to avoid noise sensitive uses (e.g., residences, convalescent homes, etc.).
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.

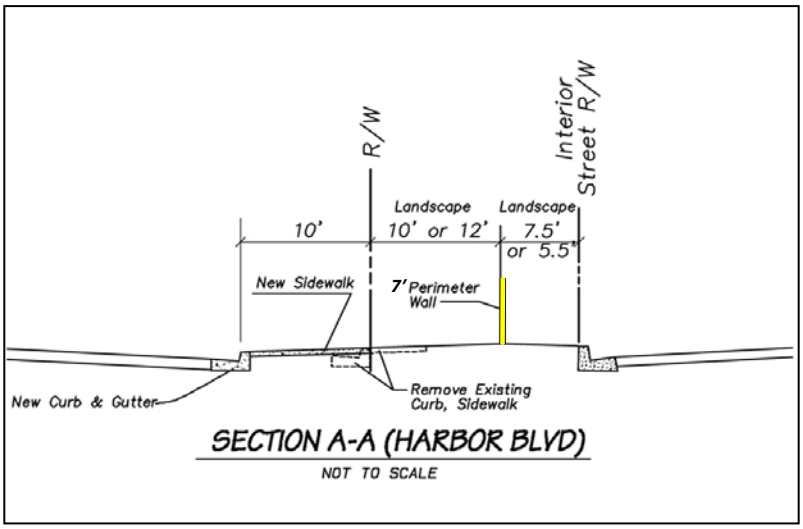
NOI-2 Prior to the issuance of grading permits, the applicant shall provide final project plans for approval by the Development Services Director, indicating that a sound barrier has been incorporated into and noted on the project plans. The barrier shall be a minimum of 7 feet high from finished grade for Lots 15 and 30 and located along the project's westerly border with a return of approximately 50 feet. The location and orientation of the barrier is depicted on Exhibit 4.12-1, *Required Noise Mitigation*.

b) *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

Less Than Significant Impact. Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The types of construction vibration impact include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. The vibration produced by construction equipment is illustrated in Table 4.12-3, *Typical Vibration Levels for Construction Equipment.*





Proposed 7' Perimeter Wall

Not to Scale

RBF CONSULTING

6/08/11 JN 10-108150 Source: RBF Consulting

2626 HARBOR BOULEVARD
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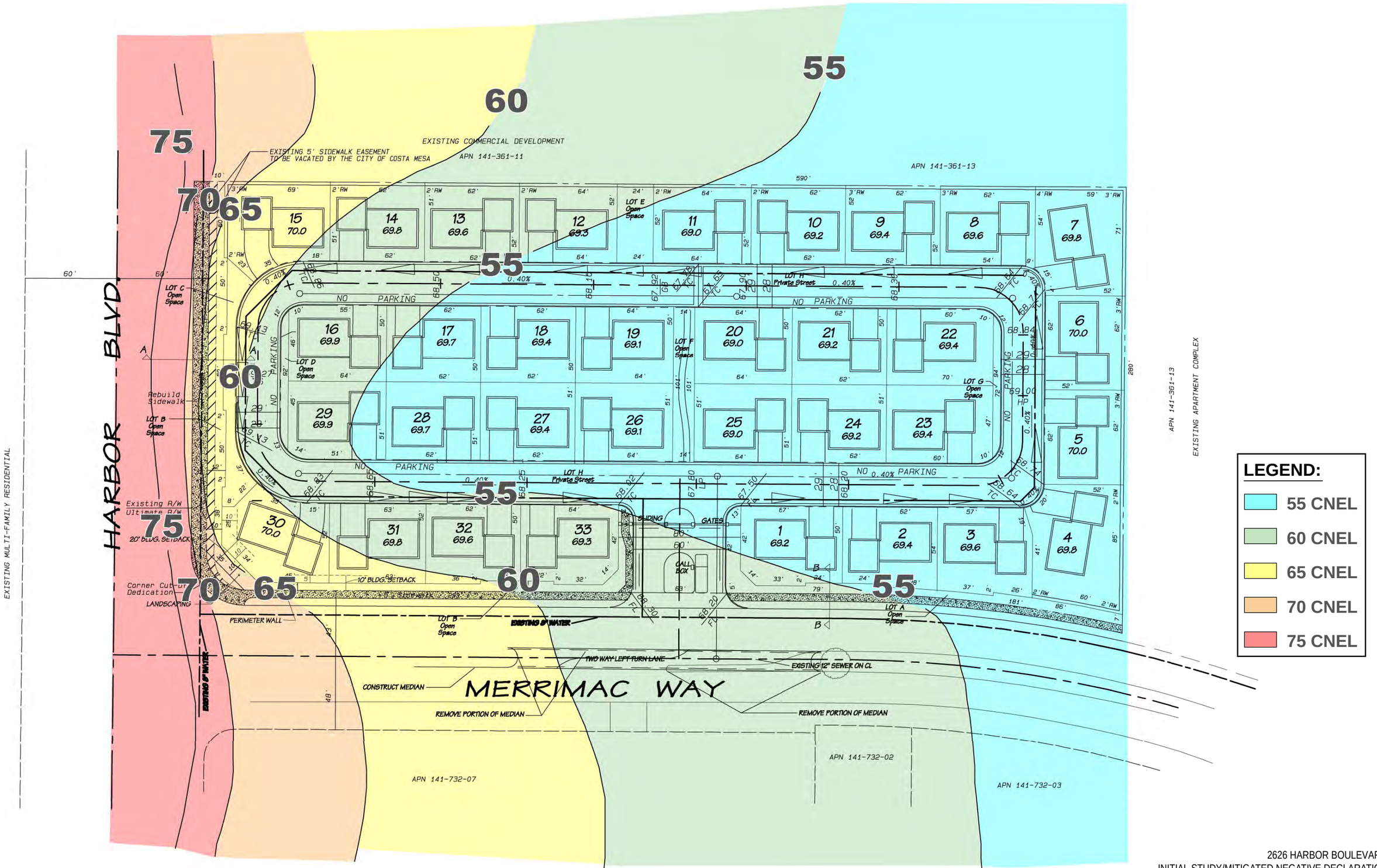
Required Noise Mitigation

Exhibit 4.12-1



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2626 HARBOR BOULEVARD
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Noise Contour Map

Exhibit 4.12-2

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Table 4.12-3
Typical Vibration Levels for Construction Equipment

Equipment	Approximate peak particle velocity at 25 feet (inches/second)	Approximate peak particle velocity at 75 feet (inches/second)
Large bulldozer	0.089	0.017
Loaded trucks	0.076	0.015
Small bulldozer	0.003	0.001
Notes: 1 - Peak particle ground velocity measured at 25 feet unless noted otherwise. 2 - Root mean square amplitude ground velocity in decibels (VdB) referenced to 1 micro-inch/second.		
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006.		

Groundborne vibration decreases rapidly with distance. As indicated in Table 4.12-3, based on the Federal Transit Administration (FTA) data, vibration velocities from typical heavy construction equipment operation that would be used during project construction range from 0.003 to 0.089 inch-per-second peak particle velocity (PPV) at 25 feet from the source of activity. At 75 feet from the source activity, vibration velocities range from 0.001 to 0.017 inch-per-second peak PPV. With regard to the proposed project, groundborne vibration would be generated primarily during site clearing and grading activities on-site and by off-site haul-truck travel. Although some structures are located within 25 feet of the project site, the proposed construction activities would not be capable of exceeding the 0.2 inch-per-second PPV significance threshold for vibration, as construction activities would be limited and would not be concentrated within 25 feet of the adjoining structures for an extended period of time. Therefore, vibration impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

c) *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

Less Than Significant With Mitigation Incorporated. Refer to Impact Statement 4.11(a).

Mitigation Measures: Refer to Mitigation Measure NOI-2.

d) *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

Less Than Significant With Mitigation Incorporated. Construction-related activities and equipment used during the project's construction phase could result in a temporary or periodic increase in ambient noise levels above existing levels. However, with implementation of Mitigation Measures NOI-1, impacts would be reduced to less than significant levels. Refer to Response 4.11(a).

Mitigation Measures: Refer to Mitigation Measure NOI-1.

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

No Impact. The project is located within the *Airport Environs Land Use Plan for John Wayne Airport*; however, John Wayne Airport is located approximately 2.3 miles to the east. Furthermore, the project site is located outside of John Wayne Airport's Noise Impact Zone. Therefore, project implementation would not expose people residing or working in the project area to excessive noise levels associated with aircraft.

Mitigation Measures: No mitigation measures are required.

f) *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

No Impact. Refer to Response 4.11(e).

Mitigation Measures: No mitigation measures are required.

4.13 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			✓	
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				✓

a) *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

Less Than Significant Impact. A project could induce population growth in an area either directly, through the development of new residences or businesses, or indirectly, through the extension of roads or other infrastructure. As described in Section 2.0, *Project Description*, the project involves development of 33 single-family dwelling units. Therefore, project implementation could induce direct population growth in the City through development of new residences.

As of January 2011, the average number of persons per household (pph) in the City of Costa Mesa is 2.76 persons per household.[7] Based on an estimate of 2.76 persons per unit, the 33 dwelling units proposed by the project could generate an increase in the City's population of approximately 91 persons. The potential population growth associated with the project would represent less than one-half percent (approximately 0.08 percent) of the City's current population of 110,146 persons.[8]

Potential growth-inducing impacts are also assessed based on a project's consistency with adopted plans that have addressed growth management from a local and regional standpoint. Southern California Association of Governments' (SCAG) growth forecasts estimate the City's population to reach 126,958 persons by 2035, representing an increase of 16,812 persons between 2011 and 2035. The project's total population growth (91 persons) represents approximately 0.5 percent of the anticipated 2035 population growth anticipated for the City. Thus, the proposed project would not result in growth exceeding SCAG's population projections and is not considered substantial in relation to the level of forecasted population growth. Therefore, the proposed project would result in a less than significant impact regarding population growth.

[7] State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2010-2011, with 2010 Benchmark. Sacramento, California, May 2011.
[8] Ibid.

The project proposes infill development in a fully urbanized area served by existing roads and infrastructure. Project implementation would not require the provision of new public services that do not already occur within the area. Public services are provided throughout the City and the establishment of new sources of service would not be required. A new storm drain pipe would be constructed to accommodate the proposed sub-watershed flows from the site (refer to Section 4.9, *Hydrology and Water Quality*). The new pipe would connect to the existing 4.5-foot-high by 8-foot-wide box under Merrimac Way. Public utilities would be extended to the site from existing facilities located adjacent to the site without the need for expansion of capacity. The roads providing access to the project site (i.e., Merrimac Way and Harbor Boulevard) are fully improved. Therefore, project implementation would not induce indirect population growth in the City through extension of roads or other infrastructure, or provision of new services.

Mitigation Measures: No mitigation measures are required.

b) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

No Impact. The project site is currently developed with commercial structures and impervious surfaces associated with the former auto dealership use. No housing exists on the project site. Therefore, project implementation would not displace any existing housing or people.

Mitigation Measures: No mitigation measures are required.

c) *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

No Impact. Refer to Response 4.12(b).

Mitigation Measures: No mitigation measures are required.

4.14 PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
1) Fire protection?			✓	
2) Police protection?			✓	
3) Schools?			✓	
4) Parks?			✓	
5) Other public facilities?			✓	

a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*

1) Fire protection?

Less Than Significant Impact. The City of Costa Mesa Fire Department has four paramedic engine companies, two truck companies, USAR/rescue squad, and a Battalion Chief on duty 24 hours a day, 7 days a week. These fire personnel respond from six fire stations strategically located within the City limits. The closest stations to the project site include:

- Fire Station No. 1, located at 2803 Royal Palm Drive, approximately 0.35 mile from the project site;
- Fire Station No. 5, located at 77 Fair Drive, approximately 0.88 mile from the project site; and,
- Fire Station No. 4, located at 2300 Placentia Avenue, approximately 1.00 mile from the project site.

Although response times may vary, the City Fire Department's goal is to respond to a fire and emergency medical emergencies within five minutes 80 percent of the time. It should be noted that automatic and mutual aid agreements throughout the County assure assistance for major incident resource needs and closest unit response service.

The proposed project would involve development of 33 single family residential units. Per the new residential code, all single family residential units are required to have fall-sprinkler systems. The introduction of residential uses to the project site may increase the number of emergency calls to the site; however, according to the City's Fire Department, the potential increase in calls for service is not anticipated to have a substantial effect on fire services and facilities.[9] Therefore, the proposed project is not anticipated to result in a need for additional fire protection staff or services.

Construction of the proposed project would meet the requirements of the California Building Code (CBC) and California Fire Code. These requirements include safe access, location and placement of fire protection services, water supply, and hazardous materials and building construction for fire safety.

Mitigation Measures: No mitigation measures are required.

2) Police protection?

Less Than Significant Impact. The City of Costa Mesa Police Department (CMPD) provides police protection services within the City. Services include crime prevention, field patrol, crime investigation, apprehension of offenders, traffic enforcement and control, regulation of non-criminal activity, and the performance of a number of related and support services. The closest CMPD facilities within City limits include:

- Primary Police Facility (Headquarters), located at 99 Fair Drive, approximately 0.79 mile from the project site; and,
- Police Substation at Fire Station No. 3, located at 2803 Royal Palm Drive, approximately 0.35 mile from the project site.

Although response times may vary, the CMPD standard response time goals are as follows:

- Five minutes or less for emergency calls, 85 percent of the time;
- Fifteen minutes or less for non-emergency calls, 85 percent of the time;
- Thirty minutes or less for report calls, 85 percent of the time.

The proposed project is located in an urbanized area currently served by the CMPD. The proposed project would involve development of 33 single family residential units, potentially resulting in the addition of 91 residents. According to the CMPD, the increase in residents is not anticipated to result in a need for additional CMPD staff or services.[10] Impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

[9] Correspondence, July 8, 2011, with City of Costa Mesa Fire Department.
[10] Correspondence July 8, 2011, with CMPD.

3) Schools?

Less Than Significant Impact. The project is within the Newport Mesa Unified School District (NMUSD). The proposed project would involve development of 33 single family residential units on a former automobile dealership. Based on current student generation rates for single- family detached residences of 0.296 students per dwelling unit[11], the project's proposed 33 single family residences would generate approximately 10 students. Per correspondence with NMUSD[12], Killybrooke Elementary School serves students from kindergarten thru sixth grade and Costa Mesa High School serves students from seventh grade thru twelfth grade. Both schools serving the proposed project would have sufficient capacity to serve the student generation rates; therefore, impacts to schools are considered less than significant.

Mitigation Measures: No mitigation measures are required.

4) Parks?

Less Than Significant Impact. The City currently maintains approximately 410.38 acres of Neighborhood and Community Parks within the City. This existing supply of Neighborhood and Community facilities, which is equivalent to approximately 3.72 acres per 1,000 persons (based on an existing population of 110,146 persons), falls short of the City's established objective of providing 5.76 acres of permanent open space (4.26 acres of neighborhood and community parks and 1.5 acres in school yards) for every 1,000 residents (City General Plan, Open Space and Recreation Element, 10.6 *Goals, Objectives and Policies*) within the City (CMMC Chapter 34, Article VIII, *Regulations for Dedication of Land for Park For Recreational Purposes*). The proposed project could generate an increase in the City's population of approximately 91 persons, resulting in a need for additional parkland. The proposed project would be required to pay park impact fees as a standard condition. Standard Condition 4.14-2, the payment of fees, would reduce potential impacts to a less than significant level.

Standard Condition

SC 4.14-1 The project applicant shall pay park impact fees, prior to the issuance of the Occupancy Permit.

Mitigation Measures: No mitigation measures are required.

5) Other public facilities?

Less Than Significant Impact. The City of Costa Mesa General Plan EIR identified a current library space standard set by the Orange County Public Library (OCPL) for a 0.2 sf per capita of library space. Existing OCPLs within the City include:

[11] Newport Mesa Unified School (NMUSD): E-mail and phone correspondence with Ara Zareczny (Facilities Analyst), June 29, 2011

[12] Newport Mesa Unified School (NMUSD): E-mail with Ara Zareczny (Facilities Analyst), July 11, 2011

- Costa Mesa/Donald Dungan Branch Library, located at 1855 Park Avenue, approximately 1.87-miles from the project site;
- Mesa Verde Branch Library, located at 2969 Mesa Verde Drive, approximately 0.84-mile from the project site; and,
- Costa Mesa Technology Library, located at 3033 South Bristol Ave., Suite Q, approximately 1.96-miles from the project site.

The General Plan EIR indicates that the current library facilities in the City do not meet this standard; however, the EIR identified less than significant impacts to library services since the libraries are operating under the OCPL standard for service, and that the OCPL did not identify direct significant impacts on these facilities. Pursuant to this approach, the proposed project would result in less than significant impacts to library services.

Mitigation Measures: No mitigation measures are required.

4.15 RECREATION

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			✓	
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?			✓	

a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

Less Than Significant Impact. No neighborhood and regional parks or other recreational facilities are located within the project site. The project site is located in an unserved area within the City as identified by the Costa Mesa General Plan. The potential increased use of existing recreational facilities would not be such that substantial physical deterioration of neighborhood and regional parks or other recreational facilities would occur.

The City's Subdivision Ordinance (Article 5 of Chapter XI [Subdivisions] of Title 13 of the Municipal Code) establishes procedures for obtaining park land dedications or assessing and collecting park impact fees from residential subdivisions. These provisions are in conformance with the Quimby Act provisions of the State Subdivision Map Act, which enables local governments to impose these requirements. As previously mentioned, Standard Condition 4.14-1, the payment of fees, would reduce potential impacts to a less than significant level.

Mitigation Measures: No mitigation measures are required.

b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?*

Less Than Significant Impact. The proposed project includes 7 landscaped lots (0.27-acre) of private open space. The on-site open space areas could provide recreational amenities. The project does not include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment; therefore, no impacts would occur in this regard. Also, refer to Section 4.13(a)(4).

Mitigation Measures: No mitigation measures are required.

4.16 TRANSPORTATION/TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			✓	
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			✓	
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				✓
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			✓	
e. Result in inadequate emergency access?			✓	
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			✓	

a) *Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?*

Less Than Significant Impact. The following analysis is based upon the *Tentative Tract No. 17423 Project Traffic Impact Analysis* (Traffic Impact Analysis), prepared by RBF Consulting (July 8, 2011); refer to Appendix 9.5.

The purpose of the Traffic Impact Analysis (TIA) is to evaluate development of the proposed project from a traffic and circulation standpoint; specifically at the Harbor Boulevard and Merrimac Way intersection. The following analysis scenarios are evaluated in this study:

- Existing conditions; and
- Forecast Existing Plus Project Conditions.

Analysis Methodology

Level of service (LOS) is commonly used as a qualitative description of intersection operation and is based on the capacity of the intersection and the volume of traffic using the intersection. The Intersection Capacity Utilization (ICU) analysis method is utilized by the City of Costa Mesa to determine the operating LOS of signalized intersections. The ICU analysis methodology describes the operation of an intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding volume to capacity (V/C) ratios shown in Table 4.16-1, *V/C and LOS Ranges (Signalized Intersections)*.

Table 4.16-1
V/C and LOS Ranges (Signalized Intersections)

LOS	V/C Ratio
A	≤ 0.600
B	0.610 to ≤ 0.700
C	0.710 to ≤ 0.800
D	0.810 to ≤ 0.900
E	0.910 to ≤ 1.000
F	> 1.000

V/C = volume to capacity ratio
LOS = level of service
1990 Transportation Research Board.

Performance Criteria

The City of Costa Mesa goal for peak hour intersection operation is LOS D or better.

Thresholds of Significance

To determine whether the addition of project-generated trips results in a significant impact at a study intersection, and thus requires mitigation, the City of Costa Mesa utilizes the following threshold of significance:

- A significant project impact occurs at a signalized study intersection when the addition of project-generated trips causes the peak hour level of service of the study intersection to change from acceptable operation (LOS A, B, C, or D) to deficient operation (LOS E or F).

Existing Traffic Operations

Existing Conditions Peak Hour Traffic Volumes

To determine the existing operation of the Harbor Boulevard/Merrimac Way study intersection, a.m. and p.m. peak period intersection movement counts were collected on a weekday in July 2011. The a.m. peak period intersection counts were collected from 7:00 a.m. to 9:00 a.m. and the p.m. peak period intersection counts were collected from 4:00 p.m. to 6:00 p.m. The counts used in this analysis were taken from the highest hour within the peak period counted.

Exhibit 4.16-1, *Existing AM/PM Peak Hour Intersection Volumes*, shows existing a.m. and p.m. peak hour LOS volumes at the Harbor Boulevard/Merrimac Way study intersection. Exhibit 4.16-2, *Existing Study Intersection Geometry/Control*, shows the existing study intersection geometry.

Existing Conditions Peak Hour LOS

Table 4.16-2, *Existing Conditions AM & PM Peak Hour Intersection LOS*, summarizes existing conditions a.m. and p.m. peak hour LOS of the Harbor Boulevard/Merrimac Way study intersection.

Table 4.16-2
Existing Conditions AM & PM Peak Hour Intersection LOS

Study Intersection	AM Peak Hour	PM Peak Hour
	V/C – LOS	V/C – LOS
Harbor Boulevard/Merrimac Way	0.36 – A	0.59 – A

V/C = volume to capacity ratio
LOS = level of service

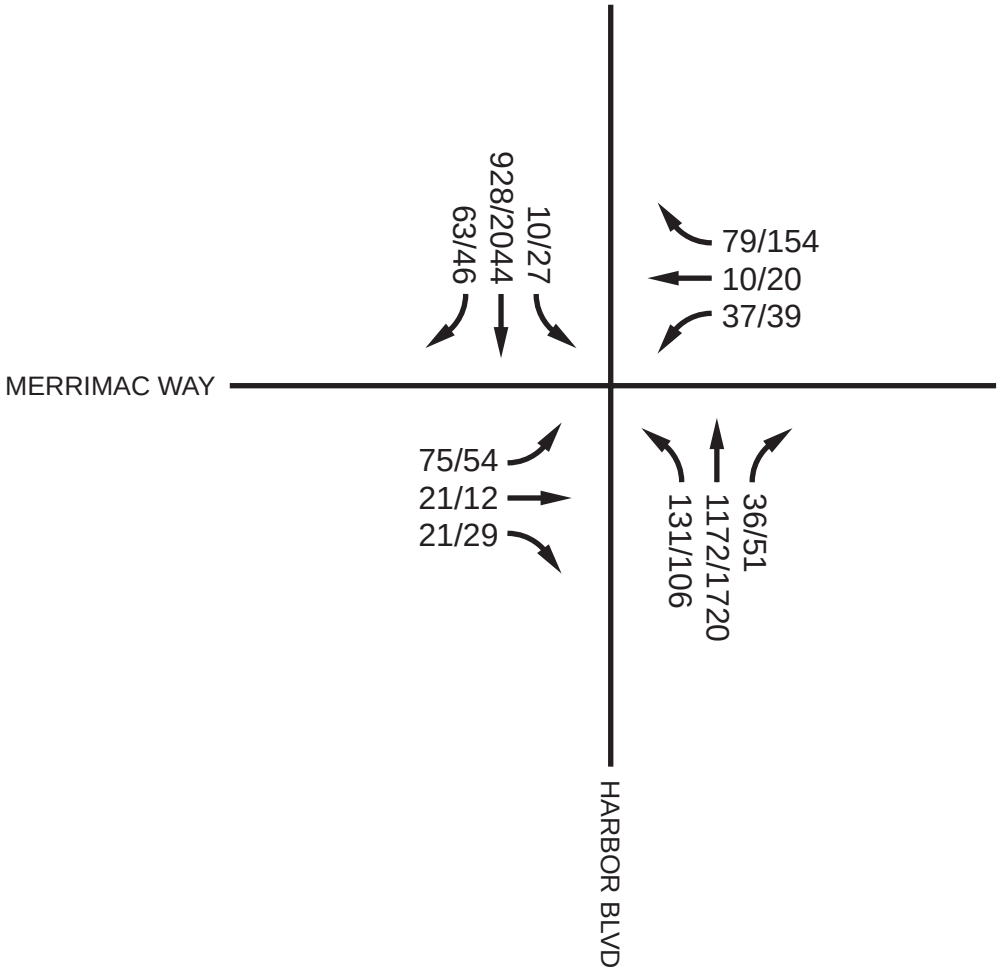
As indicated in Table 4.16-2, the Harbor Boulevard/Merrimac Way study intersection is currently operating at an acceptable level of service (LOS D or better) according to City of Costa Mesa performance criteria during the a.m. peak hour and the p.m. peak hour.

Proposed Project

The proposed project consists of a gated 33 single-family dwelling unit residential project. The gated access location at Merrimac Way is planned to accommodate both visitors and residents accessing the project site.

Project Trip Generation

To calculate trips forecast to be generated by the proposed project, ITE trip generation rates were utilized. Table 4.16-3, *ITE Trip Generation Rates*, summarizes the Institute of Transportation Engineers (ITE) trip generation rates used to calculate the number of trips forecast to be generated by the proposed project.



Legend:

XX/XX AM/PM Peak Hour Volumes

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Existing AM/PM Peak Hour Intersection Volumes

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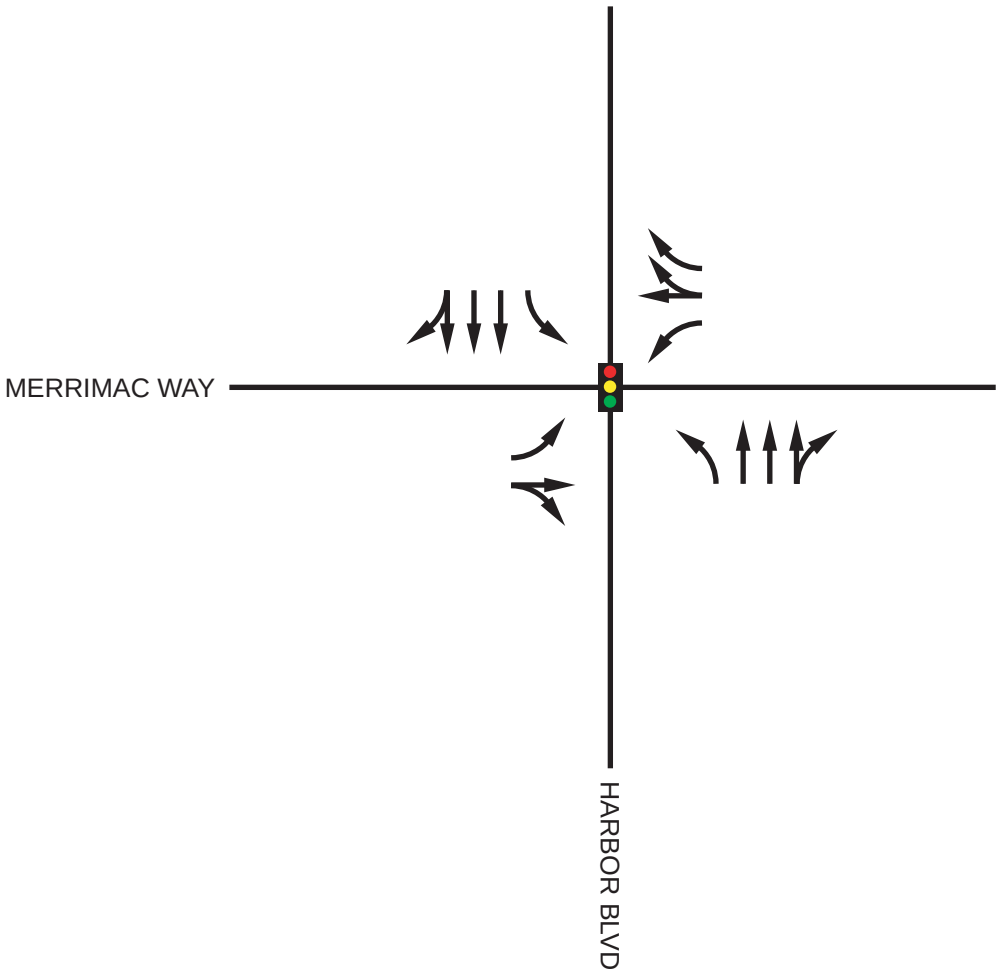
Exhibit 4.16-1



Legend:

Existing Lane

Traffic Signal

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Existing Study Intersection Geometry/Control

6/08/11 JN 10-108150

Exhibit 4.16-2

Table 4.16-3
ITE Trip Generation Rates

Land Use (ITE Code)	Units	AM Peak Hour Rates			PM Peak Hour Rates			Daily Trip Rate
		In	Out	Total	In	Out	Total	
Single-Family Detached Housing (210)	du	0.19	0.56	0.75	0.64	0.37	1.01	9.57

du = dwelling units.
Source: 2008 ITE Trip Generation Manual, 8th Edition.

Table 4.16-4, *Proposed Project Forecast Trip Generation*, summarizes the trips forecast to be generated by the proposed project using the trip generation rates shown in Table 4.16-3.

Table 4.16-4
Proposed Project Forecast Trip Generation

Land Use	AM Peak Hour Trips			PM Peak Hour Trips			Daily Trips
	In	Out	Total	In	Out	Total	
33 du – Single Family Detached House	6	18	24	21	12	33	316

du = dwelling units

As indicated in Table 4.16-4, the proposed 33 single-family dwelling unit project is forecast to generate approximately 316 daily trips, which include approximately 24 a.m. peak hour trips and approximately 33 p.m. peak hour trips.

Project Trip Distribution and Assignment

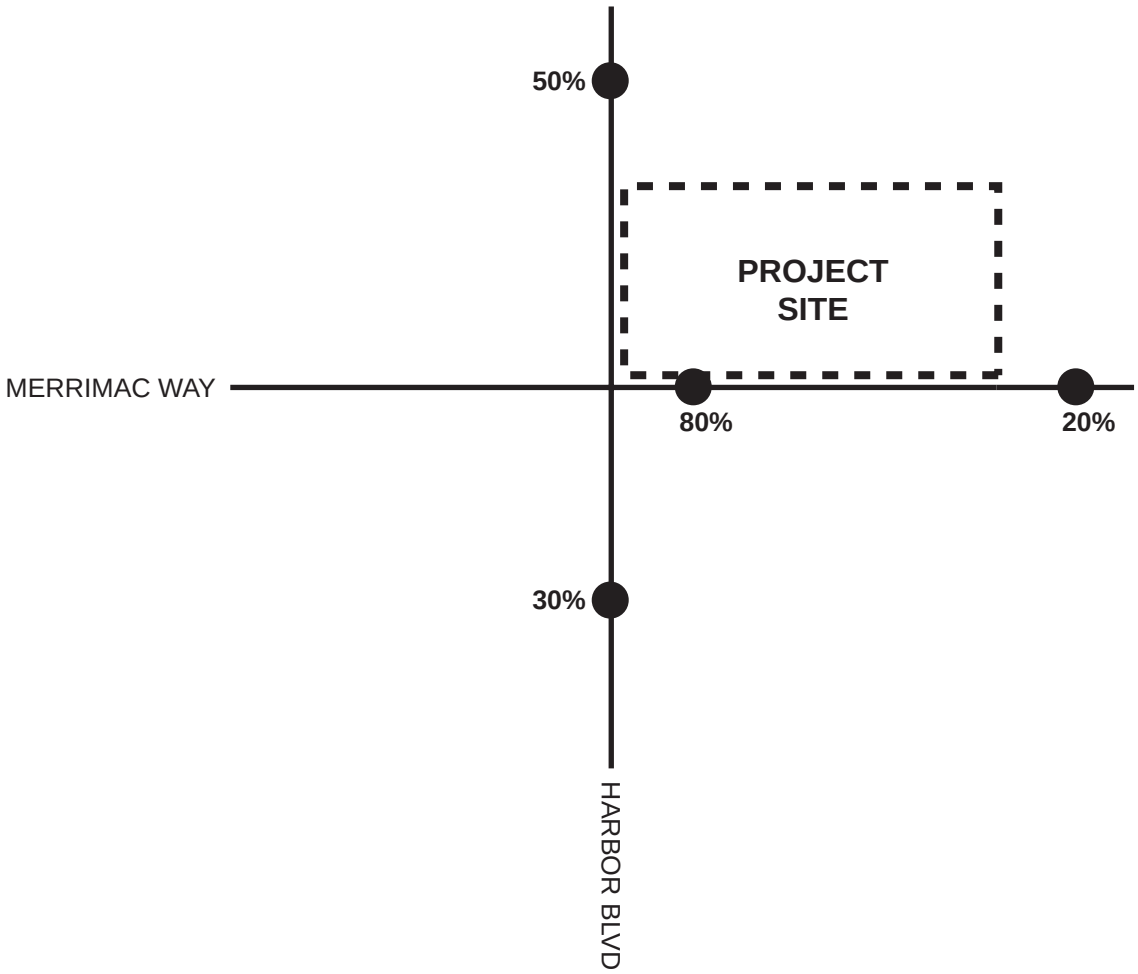
Exhibit 4.16-3, *Forecast Proposed Project Trip Distribution*, shows the forecast trip percent distribution of project-generated trips. Exhibit 4.16-4, *Forecast Proposed Project AM/PM Peak Hour Trip Assignment*, shows the corresponding assignment of project-generated peak hour trips assuming the trip percent distribution shown in Exhibit 4.16-3.

Forecast Existing Plus Project Conditions

This section summarizes traffic conditions associated with forecast existing plus project conditions.

Forecast Existing Plus Project Conditions Traffic Volumes

Forecast existing plus project conditions a.m. and p.m. peak hour volumes were derived by adding forecast project-generated trips to existing conditions traffic volumes. Exhibit 4.16-5, *Forecast Existing Plus Project AM/PM Peak Hour Intersection Volumes*, shows forecast existing plus project conditions a.m. and p.m. peak hour volumes at the Harbor Boulevard/Merrimac Way study intersection.



Legend:

XX% Percent Trip Distribution

Project Site Boundary

2626 HARBOR BOULEVARD
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Forecast Proposed Project Trip Distribution

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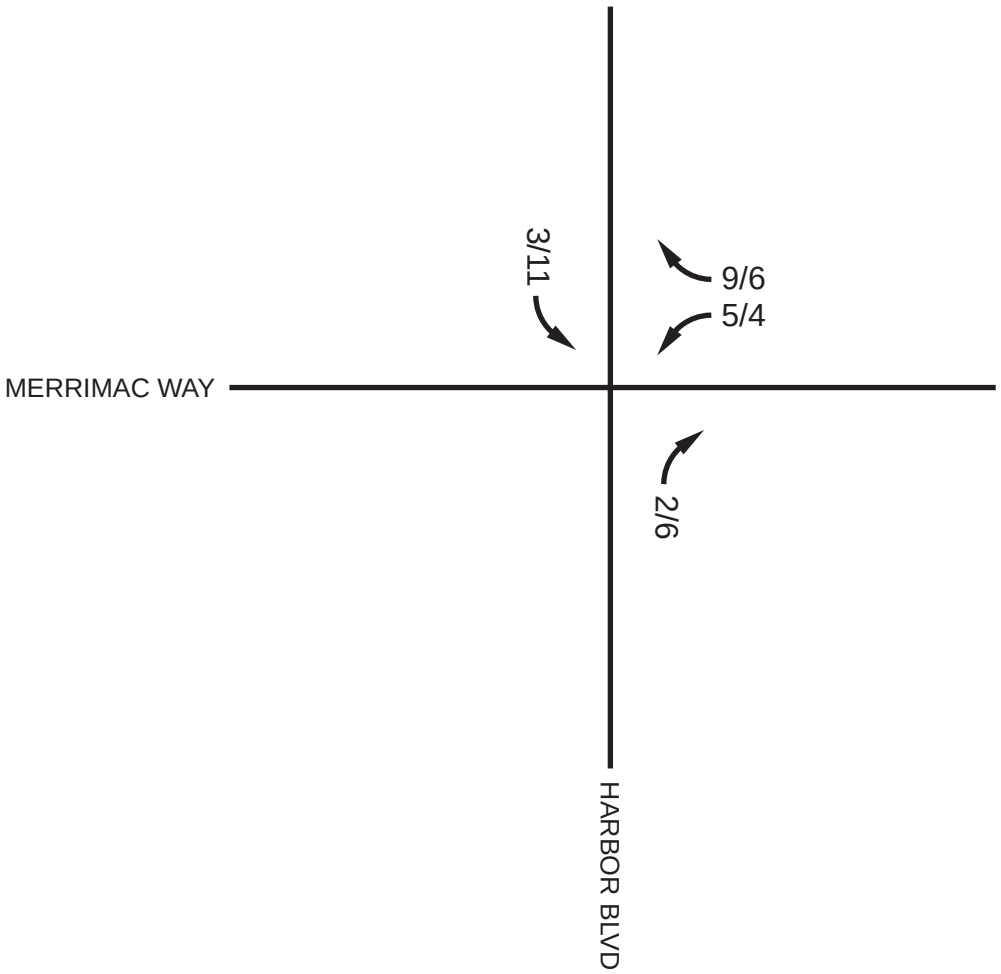
Exhibit 4.16-3



Legend:

XX/XX AM/PM Peak Hour Volumes

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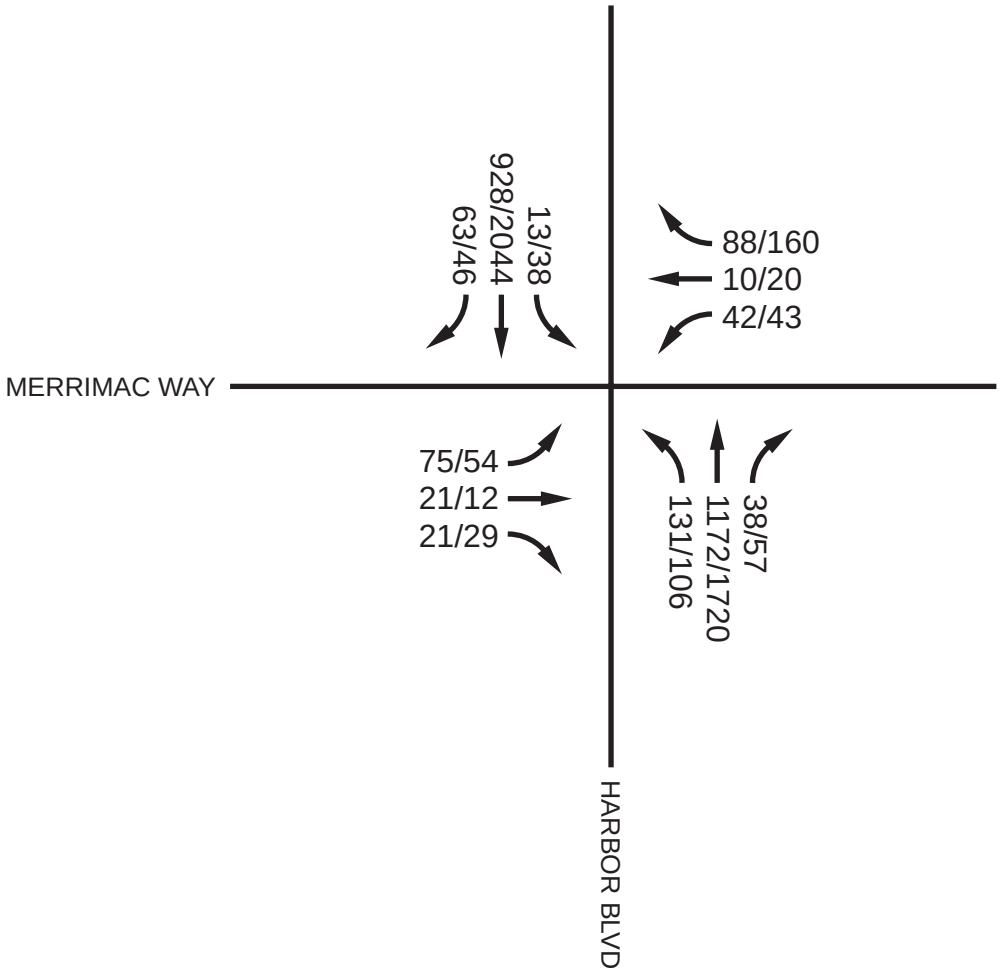
Forecast Proposed Project AM/PM Peak Hour Trip Assignment

6/08/11 JN 10-108150

Exhibit 4.16-4



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XX/XX AM/Mid-Day/PM Peak Hour Volumes

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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Forecast Existing Plus Project AM/PM Peak Hour Intersection Volumes

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Exhibit 4.16-5

Forecast Existing Plus Project Conditions Intersection LOS

Table 4.16-5, *Forecast Existing Plus Project Conditions AM & PM Peak Hour Intersection LOS*, summarizes forecast existing plus project conditions a.m. and p.m. peak hour LOS of the Harbor Boulevard/Merrimac Way study intersection

Table 4.16-5
Forecast Existing Plus Project Conditions AM & PM Peak Hour Intersection LOS

Study Intersection	Existing Conditions		Forecast Existing Plus Project Conditions		Significant Impact?
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	V/C – LOS	V/C – LOS	V/C – LOS	V/C – LOS	
Harbor Boulevard/Merrimac Way	0.36 – A	0.59 – A	0.37 – A	0.59 – A	No
V/C = volume to capacity ratio					

As shown in Table 4.16-5, with the addition of project-generated trips, the Harbor Boulevard/Merrimac Way study intersection is forecast to continue to operate at an acceptable LOS (LOS D or better) according to City of Costa Mesa performance criteria for forecast existing plus project conditions.

As also shown in Table 4.16-5, no significant traffic impacts for forecast to occur as a result of the proposed project based on City of Costa Mesa established thresholds of significance for existing plus project conditions. Impacts would be less than significant in this regard.

Ingress Queue Analysis

An ingress queuing analysis was conducted to determine the required queue storage capacity for the gated access to the project site from Merrimac Way. At a gated ingress location, the critical vehicular queue length requirement is based on the queue generated by visitors who have to wait at a call box to be let into the community. Residents have immediate access and therefore do not queue outside the gates.

Analysis Methodology

The Crommelin Methodology is a queuing analysis methodology used to determine the required storage reservoir required for visitors and visitors at entryways to gated communities, based on Entrance-Exit Design and Control for Major Parking Facilities (Robert W. Crommelin, October 5, 1972). The Crommelin Methodology determines the minimum storage length required to provide adequate access and control at gated entry points to ensure the design of an efficient access system with minimal impacts on the surrounding street network. The methodology is based on worst case peak hour volumes, gate control strategies, the processing rate at the control point and the number of travel lanes. The determination of the reservoir length required to serve peak hour volumes is based on a Poisson distribution.

A traffic intensity factor is calculated by dividing peak hour traffic volumes by the control point processing rate. The intensity factor is plotted on a Crommelin Reservoir Needs nomograph to determine the number of vehicles queuing behind the control point service position based on a selected confidence interval. The forecast queue of vehicles is increased by one vehicle to account for the service position vehicle and multiplied by 25 feet per vehicle to determine the total required storage capacity.

Project Ingress Crommelin Queue Analysis

The following conservative assumptions were made in determining data input for the queuing analysis:

- 25 percent of all inbound project trip generation during both the a.m. and p.m. peak hours is assumed to be visitor trips.
- The processing rate at the control point is assumed to be 60 vehicles per hour (i.e., one visitor vehicle every 60 seconds can be processed and continue through the gate).
- The analysis is based on a 99 percent confidence interval (i.e., 99 percent of the time, the queue will be equal to or less than the maximum vehicle queue).

Table 4.16-6, *Project Driveway Ingress Queuing Analysis Summary*, summarizes the results of the Crommelin queuing analysis for the project ingress location on Merrimac Way.

Table 4.16-6
Project Driveway Ingress Queuing Analysis Summary

Project Driveway	Time Period	Entering Vehicle Volume	Service Rate (veh/hr)	Traffic Intensity Factor	Maximum Vehicle Queue	Required Queue Storage Capacity (feet)	Queue Storage Capacity Provided (feet)	Adequate Queue Storage Provided?
Merrimac Way	AM	2	60	0.0333	1	25	25	Yes
	PM	5	60	0.0833	1	25	25	Yes

As indicated in Table 4.16-6, the proposed ingress location at Merrimac Way is forecast to have a maximum queue of one visitor vehicle during the a.m. peak hour and one visitor vehicle during the p.m. peak hour, requiring a minimum storage length of 25 feet between the visitor call box and Merrimac Way in order to accommodate the visitor vehicular queue during both the a.m. and p.m. peak hours. The project proposes to provide adequate queue storage to accommodate the forecast 25 foot queue; thus, adequate queuing space would be provided for visitors accessing the project site and would not result in impacts to the surrounding street network. Impacts would be less than significant in this regard.

b) *Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*

Less Than Significant Impact. The purpose of the Congestion Management Program (CMP) is to develop a coordinated approach to managing and decreasing traffic congestion by linking the various transportation, land use, and air quality planning programs throughout the County. The program is consistent with that of SCAG. The CMP program requires review of substantial individual projects, which might on their own impact the CMP transportation system.

According to the CMP (Orange County Transportation Authority, 2009), a CMP traffic impact analysis (TIA) shall be prepared for proposed development projects which generate 2,400 or more daily trips. For proposed development projects which will directly access a CMP Highway System link, the threshold for requiring a CMP TIA is reduced to 1,600 or more daily trips.

The proposed project is forecast to generate 316 daily trips. Since the proposed project daily trip generation does not exceed Orange County CMP daily trip thresholds for preparation of a TIA, no further CMP traffic analysis is required. The proposed project would not conflict with the CMP.

Mitigation Measures: No mitigation measures are required.

c) *Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

No Impact. Due to the nature and limited scope of the proposed residential development, project implementation would not increase air traffic levels such that a change in air traffic patterns would occur. Additionally, the project does not propose a change in the location of an airport facility.

Mitigation Measures: No mitigation measures are required.

d) *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Less Than Significant Impact. The project proposes gated access from Merrimac Way that would accommodate both visitors and residents accessing the project site. Although eastbound and westbound left turn pockets currently occur on Merrimac Way, the proposed project driveway would not align with the existing eastbound left turn pocket. Therefore, the project proposes removing and reconstructing a portion of the existing median on Merrimac Way in order to provide a two-way left turn lane providing access to the proposed project driveway and the existing driveway for the property located south of Merrimac Way; refer to Exhibit 2.5-2, Tract Map No. 17423. Further, as discussed above, the proposed project would provide adequate queuing space for visitors accessing the gated project site and would not result in impacts to the surrounding street network or create a hazard. Thus, the proposed project and associated improvements would not represent an increase in hazards associated with a design feature. Impacts would be less than significant in this regard.

The proposed project would not substantially increase hazards due to incompatible uses. As concluded in Response 4.10 (b), this area of Harbor Boulevard has been historically suitable for residential development as evidenced by the existing Harbor Village apartments, Richmond American homes, the College Park residential community, and the recent approval of a senior housing complex across Harbor Boulevard.

Mitigation Measures: No mitigation measures are required.

e) *Result in inadequate emergency access?*

Less Than Significant Impact. The proposed project would be required to meet all applicable local and State regulatory standards for adequate emergency access; refer to Response 4.7(g).

Mitigation Measures: No mitigation measures are required.

f) *Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?*

Less Than Significant Impact. OCTA provides public bus transportation within the City. Specifically, OCTA Route 43 provides bus service along Harbor Boulevard in the vicinity of the project site. According to *Costa Mesa General Plan* Exhibit CIR-6 (Master Plan of Bikeways), Harbor Boulevard, south of Merrimac Way, is identified as a Bike Trail (Class 1) and Merrimac Way is identified as a Bike Lane (Class 2). Sidewalk facilities are also located adjacent to the project site on Harbor Boulevard and Merrimac Way. The project does not propose any changes to existing transit and bicycle facilities within the project area. The project would rebuild the sidewalk adjacent to Harbor Boulevard, temporarily limiting pedestrian access along Harbor Boulevard adjacent to the project site. However, construction activities would be short-term and would not significantly impact pedestrian facilities or activity within the area. Further, the project would not conflict with any adopted policies, plans, or programs that address public transit, bicycle, or pedestrian facilities. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

4.17 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			✓	
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			✓	
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		✓		
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			✓	
e. Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			✓	
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			✓	
g. Comply with federal, state, and local statutes and regulations related to solid waste?			✓	

Threshold Analysis

The criteria used in this analysis as a threshold for impact significance are based on the Environmental Checklist questions in Section 3.0 of this Draft IS/MND, as listed below. The proposed project is deemed to have a potentially significant impact related to utilities and service systems if implementation would result in any of the following:

a) *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

Less Than Significant Impact. The project is subject to compliance with all provisions of the NPDES program, as enforced by the State WRCB and Santa Ana RWQCB, according to federal regulations for both point and nonpoint source discharges to surface waters of the United States. For point source discharges, such as sewer outfalls, each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Additionally, the NPDES Phase I and Phase II requirements would regulate discharge from construction sites. Wastewater generated from the proposed project would be treated by the Costa Mesa Sanitary District. The Costa Mesa Sanitary District (CMSD) determined that the proposed project would not

adversely affect the District's treatment capacity.[13] Therefore, the proposed project would not exceed wastewater treatment requirements of the Santa Ana RWQCB with respect to discharges to the sewer system or stormwater system within the City. Refer to the Appendix, Section 9.5, for correspondence with the Districts concerning available capacity.

Standard Condition

SC 4.17-1 Prior to the issuance of a connection permit, the applicant shall pay applicable connection fees.

Mitigation Measures: No mitigation measures are required.

b) *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Less Than Significant Impact. The proposed project would involve development of 33 single family residential units, potentially resulting in the addition of 91 residents. Existing sewer facilities in the project vicinity include an 18-inch vitrified clay pipe (VCP) in Harbor Boulevard, an 8-inch main, and five 6-inch laterals in Merrimac Way, which extend to the project site. The CMSD is responsible for maintaining 215 miles of sewer mainline that transports 13.6 million gallons a day to treatment facilities for 116,700 residents residing in Costa Mesa, Newport Beach and unincorporated County of Orange. According to the CMSD, flows from the proposed development would be less than allowed in the previous commercial zoning. In addition, a flow diversion of the CMSD Harbor Boulevard sewer main into the OCSD trunk at the Baker Street intersection has alleviated downstream sewer capacity concerns in the CMSD Harbor Boulevard sewer main. The increase in residents is not anticipated to result in a need for services. Impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

c) *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Less Than Significant Impact with Mitigation Incorporated. Under the proposed condition the watershed would shift from two existing sub-watersheds (A and B) to one sub-watershed "C"; refer to Exhibit 4.9-2, *Proposed Condition Hydrology Map*. The proposed sub-watershed would be tributary to a new proposed storm drain pipe that would connect the new on-site storm drain directly to the existing 4.5-foot-high by eight-foot-wide box (box) under Merrimac Way (which is the existing discharge point of Existing Condition Watershed A). As a result of the altered watershed configuration, the proposed watershed tributary to the box would increase slightly. The proposed on site storm drain system would consist of gutters, catch basins and storm drains to capture the on-site flows and direct the flows to the new storm drain extension, and ultimately the

[13] Costa Mesa Sanitary District: E-mail correspondence with Rob Hamers (District Engineer), June 12, 2011

box in Merrimac Way. Construction of the new storm drain to serve flows from the proposed project would reduce impacts to a less than significant level.

Mitigation Measures: Refer to Mitigation Measure HYD-1.

d) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

Less Than Significant Impact. Mesa Consolidated Water District (MCWD) provides water service to more than 110,000 customers in an 18 square mile area. The service area includes the City of Costa Mesa, parts of Newport Beach, and some unincorporated sections of Orange County, including the John Wayne Airport. MCWD's water is a blend of local ground water and imported water from Northern California and the Colorado River. From MCWD's nine wells, groundwater is pumped from Orange County's groundwater basin which underlies north-central Orange County from Irvine to the Los Angeles County border and from Yorba Linda to the Pacific Ocean. It is replenished by water from the Santa Ana River and imported water purchased from the Metropolitan Water District of Southern California.

Water consumed by the project would be supplied by the MCWD. The average southern California home uses 384 gallons of water daily. An individual uses between 100 to 140 gallons of water each day.[14] Based on the average daily consumption the proposed 33 unit development would generate an average daily water demand of approximately 12,672 gallons. As confirmed by the MCWD, there are sufficient water supplies to accommodate the water demand generated by the proposed project in addition to existing commitments.[15] There is currently an 8-inch asbestos cement pipe (ACP) pipe in Merrimac Way and a 6-inch ACP and 12-inch concrete cylinder pipe (CCP) pipeline in Harbor Boulevard. Water lines in Merrimac Way and Harbor Boulevard are more than adequate for the needed water supply. Impacts are considered less than significant.

Mitigation Measures: No mitigation measures are required.

e) *Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Less Than Significant Impact. Refer to Response 4.17(b) above.

Mitigation Measures: No mitigation measures are required.

f) *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

Less Than Significant Impact. The proposed project would be served by the Orange County landfill system. The landfill system is operated by the Orange County Integrated

[14] Mesa Consolidated Water District Website: http://www.mesawater.org/tips_information.php, accessed June 21, 2011

[15] Mesa Consolidated Water District: Phone and E-mail correspondence with Bob McVicker (District Engineer), June 21, 2011

Waste Management Department (OCIWMD) and includes three active landfills, four household hazardous waste collection centers (HHWCCs), and 12 closed landfills. These landfills are located in Brea, Irvine, and San Juan Capistrano (this facility is both a landfill and a Household Waste Collection Center). Although waste may be transported to any of the three sites, the Frank R. Bowerman Landfill in Irvine is the closest facility to the project and is likely to be the solid waste facility most often receiving waste from the project. This 725 acre landfill has 534 acres permitted for the landfill disposal. This landfill can accept up to 11,500 tons per day. The expected closure date of this landfill is 2053.

Table 4.17-1, *Estimate of Solid Waste Generation*, estimates the project's solid waste generation. As indicated in Table 4.17-1, the proposed project is estimated to generate approximately 404 pounds per day of solid waste per day. The project's solid waste generation would signify a negligible amount (less than one-tenth percent) of the existing maximum permitted capacity of 11,500 tons per day of the landfill. Compliance with the City's recycling program would further reduce long-term solid waste disposal service impacts. Thus, the project would have a less than significant impact on the landfill capacity.

Table 4.17-1
Estimate of Solid Waste Generation

Land Use	Solid Waste Generation Rate[1]	Solid Waste Generation (pounds/day)
Single-Family Residential Dwellings: 33 Units	12.23 pounds/unit/day	404
1. Table 4.13-6, *Solid Waste Generated From Existing and Proposed Development*[16]		

Mitigation Measures: No mitigation measures are required.

g) *Comply with federal, state and local statutes and regulations related to solid waste?*

Less Than Significant Impact. The California Integrated Waste Management Act of 1989 (AB 939) required that local jurisdictions divert at least 50 percent of all solid waste generated by January 1, 2000. The project would be required to comply with the City' Source Reduction and Recycling Element (SRRE) program for diverting the solid waste. The City already diverts 50 percent of its solid waste generated and is continuing to improve efforts to increase the existing diversion rates. Under the SRRE program, project implementation would be consistent with AB 939.

The CMSD is responsible for residential trash collection and transmittal to a recycling facility for recycling and disposal. The CMSD also provides liquid waste collection and transmission to Orange County Sanitation District facilities for treatment and disposal. CMSD's method of recycling allows residents to place all their trash in standardized containers without any sorting. The trash is taken to a recycling facility in Stanton where it is mechanically and hand sorted and the recyclables are removed. The District reached 50 percent diversion prior to the year 2000 and is in full compliance with

[16] http://www.calrecycle.ca.gov/wastechar/wastegenrates/Residential.htm

all State mandates. Solid and liquid waste collection fees are collected on the property tax bill as special assessments. The proposed project would comply with federal, state and local statutes and regulations related to solid waste by providing a solid waster management plan to comply with AB939 to reduce the waster stream. Implementation of Standard Condition 4.17.2 would ensure impacts related to solid waste remain less than significant.

Standard Condition

SC 4.17-2 Prior to the issuance of grading permits, the property owner/developer shall submit a Solid Waster Management Plan with recycling capabilities to the Department of Public services for review and approval. Refuse collection and disposal for the proposed project shall comply with Assembly Bill 939, the Orange County Integrated Waster management Plan, and the City of Costa Mesa Source Reduction and Recycling Element.

Mitigation Measures: No mitigation measures are required.

4.18 MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				✓
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			✓	
c. Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?		✓		

a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

No Impact. The project site is within a developed urban area, and there are no rare, endangered, threatened plants or animal species within the project site. Implementation of the proposed project will not result in the physical degradation of the environment nor adversely impact any sensitive biological species, cultural resources, or sensitive species.

b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

Less Than Significant Impact with Mitigation Incorporated. The proposed project, in combination with past, present, and reasonably foreseeable projects, may contribute to a cumulative environmental effect due to construction activities. . Implementation of the proposed project would not result in the physical degradation of the environment nor adversely impact sensitive biological species, cultural resources, or water resources.

Short-term construction-related impacts related to air quality are considered less than significant, and conditions of approval would ensure that construction vehicle emissions/exhaust, fugitive dust, and noise are minimized to the fullest extent possible. Furthermore, implementation of the proposed mitigation measures and standard conditions found throughout this environmental document would result in significant, unavoidable, adverse environmental impacts. Therefore, the projects potential impacts are considered less than cumulatively considerable.

The project would result in a less than significant increase in demand on public services and utilities and service systems. Furthermore, the proposed project would be within the development capacity of the General Plan. No significant cumulative impacts related to transportation and traffic would occur. Impacts related to air quality, population and housing, and land use have been evaluated against applicable local and regional plans and policies. These include the SCAQMD Air Quality Management Plan, the City of Costa Mesa General Plan, SCAG's Regional Housing Needs Assessment, and other plans and policies. The proposed project would be consistent with the applicable plans and policies.

c) *Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?*

Less Than Significant Impact with Mitigation Incorporated. Previous sections of this Initial Study/Environmental Assessment reviewed the proposed project's potential impacts related to aesthetics, air pollution, noise, public health and safety, traffic and other issues. Standard conditions and mitigation measures have been incorporated into the project that would reduce the potential adverse impacts on human beings to a less than significant level. With mitigation and compliance with applicable land use plans and policies, development of the proposed project would not result in any significant impacts related to these issues. Therefore, the proposed project would not result in environmental impacts that would cause substantial adverse effects on human beings.

5.0 INVENTORY OF STANDARD CONDITIONS

SC 4.1-1 Prior to the issuance of building permits, the applicant shall submit a Lighting Plan and Photometric Study for the approval of the City's Development Services Department. The Lighting Plan shall demonstrate compliance with the following:

- The mounting height of lights on light standards shall not exceed 18 ft in any location on the project site unless approved by the Development Services Director;
- The intensity and location of lights on buildings shall be subject to the Development Services Director's approval;
- All site lighting fixtures shall be provided with a flat glass lens. Photometric calculations shall indicate the effect of the flat glass lens fixture efficiency;
- Lighting design and layout shall limit spill light to no more than 0.5 foot-candle at the property line of the surrounding neighbors, consistent with the level of lighting that is deemed necessary for safety and security purposes on site; and,
- Glare shields may be required for select light standards.

SC 4.5-1 In the event that archeological resources are unearthed during project subsurface activities, all earth-disturbing work within a 100-ft radius shall be temporarily suspended or redirected until an archeologist has evaluated the nature and significance of the find.

SC 4.5-2 In the event that paleontological resources are unearthed during subsurface construction activities, all earth-disturbing work within a 100-ft radius of the find shall be temporarily suspended or redirected until a paleontologist has evaluated the nature and significance of the find.

SC 4.5-3 If human remains are unearthed, State Health and Safety Code Section 7050.5 require that no further disturbance shall occur until the County coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then contact the most likely descendant of the deceased Native American, who will then serve as consultant on how to proceed with the remains.

SC 4.6-1 Design, grading, and construction shall be performed in accordance with the requirements of the California Building Code applicable at the time of grading as well as the appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in a final written report, subject to review by the City of Costa Mesa Building official prior to issuance of grading permits.

SC 4.6-2 Prior to the issuance of grading permits, the project applicant shall provide the City of Costa Mesa Department of Building Safety with a geotechnical investigation of the project site detailing recommendations for remedial grading in order to reduce the potential of on-site soils to cause unstable conditions. Design, grading, and construction shall be performed in accordance with the requirements of the California Building Code applicable at the time of grading, appropriate local grading regulations, and the recommendations of the geotechnical consultant as summarized in a final written report, subject to review by the City of Costa Mesa Department of Building Safety.

SC 4.6-3 Construction General Permit Notice of Intent (NOI) Design: Prior to the issuance of preliminary or precise grading permits, the project applicant shall provide the City Engineer with evidence that an NOI has been filed with the Storm Water Resources Control Board (SWRCB). Such evidence shall consist of a copy of the NOI stamped by the SWRCB or Regional Water Quality Control Board (RWQCB), or a letter from either agency stating that the NOI has been filed.

SC 4.6-4 Construction Phase Storm Water Pollution Prevention Plan (SWPPP): Prior to the issuance of grading permits, the applicant shall prepare a SWPPP that complies with the Construction General Permit and will include at a minimum the following:

- Discuss in detail the BMPs planned for the project related to control of sediment and erosion, nonsediment pollutants, and potential pollutants in non-storm water discharges;
- Describe post-construction BMPs for the project;
- Explain the maintenance program for the project's BMPs;
- List the parties responsible for SWPPP implementation and BMP maintenance during and after grading. The project applicant shall implement the SWPPP and modify the SWPPP as directed by the Construction General Permit.

SC 4.9-1 In order to comply with the 2003 DAMP, the proposed project shall prepare a Storm Drain Plan, Stormwater Pollution Prevention Plan (SWPPP), and Water Quality Management Plan (WQMP) conforming to the current National Pollution Discharge Elimination System (NPDES) requirements, prepared by a Licensed Civil Engineer or Environmental Engineer, which shall be submitted to the Department of Public Works for review and approval.

- The SWPPP shall be prepared and updated as needed during the course of construction to satisfy the requirements of each phase of development. The plan shall incorporate all necessary Best Management Practices (BMPs) and other City requirements to eliminate polluted runoff until all construction work for the project is completed. The SWPPP shall include treatment and disposal of all dewatering operation flows, and for nuisance flows during construction.

- A WQMP shall be maintained updated as needed to satisfy the requirements of the adopted NPDES program. The plan shall ensure that the existing water quality measures for all improved phases of the project are adhered to.
- Location of the BMPs shall not be within the public right-of-way.

SC 4.10-1 The Applicant shall submit a planning application for all discretionary approvals associated with the proposed project in accordance with Chapter III, Planning Applications, of the Costa Mesa Zoning Code. This code requirement specifies that the Applicant/Developer shall apply and obtain approval of General Plan Amendment, rezone, master plan, and tentative tract map for the proposed residential development from the City of Costa Mesa prior to submission of 100% complete construction plans for building plan check.

SC 4.14-1 The project applicant shall pay park impact fees, prior to the issuance of the Occupancy Permit.

SC 4.17-1 Prior to the issuance of a connection permit, the applicant shall pay applicable connection fees.

SC 4.17-1 Prior to the issuance of grading permits, the property owner/developer shall submit a Solid Waster Management Plan with recycling capabilities to the Department of Public services for review and approval. Refuse collection and disposal for the proposed project shall comply with Assembly Bill 939, the Orange County Integrated Waster management Plan, and the City of Costa Mesa Source Reduction and Recycling Element.

6.0 INVENTORY OF MITIGATION MEASURES

AIR QUALITY

AQ-1 Prior to issuance of any Grading Permit, the Director of Public Works and the Building Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce short-term fugitive dust impacts on nearby sensitive receptors:

- All active portions of the construction site shall be watered at least twice daily to prevent excessive amounts of dust;
- On-site vehicle speed shall be limited to 15 miles per hour;
- All on-site roads shall be paved where feasible, watered as needed (to maintain a moisture content of 12 percent), or chemically stabilized;
- Visible dust beyond the property line which emanates from the project shall be prevented to the maximum extent feasible;
- All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site;
- Track-out devices shall be used at all construction site access points;
- All delivery truck tires shall be watered down and/or scraped down prior to departing the job site;
- Replace ground cover on disturbed areas quickly; and
- Implement street sweeping program with Rule 1186-compliant PM_{10} efficient vacuum units.

AQ-2 All trucks that are to haul excavated or graded material on-site shall comply with State Vehicle Code Section 23114 (Spilling Loads on Highways), with special attention to Sections 23114(b)(F), (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads. Prior to the issuance of grading permits, the Applicant shall coordinate with the appropriate City of Costa Mesa Engineer on hauling activities compliance.

HAZARDS AND HAZARDOUS MATERIALS

HAZ-1 Prior to demolition activities, removal and/or abatement of asbestos containing building materials and hazardous materials associated with the existing building materials shall be conducted by a qualified environmental professional in consultation with the City of Costa Mesa Fire Department. An asbestos and hazardous materials abatement specification shall be developed by the qualified

environmental professional in order to clearly define the scope and objective of the abatement activities.

HAZ-2 Prior to issuance of a building permit, soil sampling shall occur within the portions of the project site that have historically been utilized for agricultural purposes and may contain pesticide residues in the soil, as determined by a qualified environmental professional with Phase II/site characterization experience. The sampling shall determine if pesticide concentrations exceed established regulatory requirements and shall identify further site characterization and remedial activities, if necessary.

HAZ-3 Prior to issuance of a grading permit, a Construction Contingency Plan shall be developed by a qualified environmental professional in consultation with the City of Costa Mesa Fire Department. At a minimum, the Construction Contingency Plan shall include guidance for handling, segregating, and characterizing subsurface structures and potentially impacted soil generated during the demolition and redevelopment activities, if found, in order to minimize impacts to worker safety and the environment.

HYDROLOGY AND WATER QUALITY

HYD-1 Prior to the issuance of any Grading Permit, the Applicant shall:

- Prepare a detailed hydrology study, approved by the City Engineer.
- Analyze, design, and construct the new storm drain between the project site and the existing 4.5-foot-high by eight-foot-wide RCB box.
- Design all storm drain facilities, approved by the City Engineer, for 25-year storm event protection
- All storm drain in public right-of-way shall be a minimum of 24 inches by City of Costa Mesa requirements and will be designed in accordance with the Orange County Local Drainage Manual including a minimum spacing between manholes of 300 feet.

NOISE

NOI-1 Prior to Grading Permit issuance, the Contractor shall demonstrate, to the satisfaction of the City of Costa Mesa Public Works Department that the project complies with the following:

- Construction contracts specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices.
- Construction haul routes shall be designed to avoid noise sensitive uses (e.g., residences, convalescent homes, etc.).
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.

NOI-2 Prior to the issuance of grading permits, the applicant shall provide final project plans for approval by the Development Services Director, indicating that a sound barrier has been incorporated into and noted on the project plans. The barrier shall be a minimum of 7 feet high from finished grade for Lots 15 and 30 and located along the project's westerly border with a return of approximately 50 feet. The location and orientation of the barrier is depicted on Exhibit 4.12-1, *Required Noise Mitigation*.

7.0 REFERENCES

The following references were utilized during preparation of this Initial Study. These documents are available for review at the City of Costa Mesa, 77 Fair Drive, Costa Mesa, California 92626.

1. City of Costa Mesa, *City of Costa Mesa General Plan*, adopted January 22, 2002.

2. City of Costa Mesa, *City of Costa Mesa General Plan*, January 22, 2002.

3. *City of Costa Mesa Municipal Code*, Codified through Ordinance No. 11-3, enacted March 1, 2011 (Supp. No. 120, 3-11).

4. California Air Resources Board, *Climate Change Proposed Scoping Plan*, October 2008.

5. California Air Pollution Control Officers Association, *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, 2008.

6. California Climate Change Center, *Our Changing Climate, Assessing the Risks to California,* July 2006.

7. California Energy Commission, Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004, December 2006.

8. California Environmental Protection Agency, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature (Executive Summary), March 2006.

9. California Governor's Office of Planning and Research, *CEQA AND CLIMATE CHANGE: Addressing Climate Change Through the California Environmental Quality Act (CEQA) Review*, June 19, 2008.

10. California Governors Office of Planning and Research, *Proposed Amendments to 14 Sections of the CEQA Guidelines*, January 2009.

11. California Natural Resources Agency, *2009 California Climate Adaptation Strategy*, December 2009.

12. Energy Information Administration, *Other Gases: Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride*, October 29, 2001.

13. Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006.

14. Harris, Cyril, *Handbook of Noise Control,* 1979.

15. Intergovernmental Panel on Climate Change, *Climate Change, The Science of Climate Change – Contribution of Working Group I to the Second Assessment Report of the IPCC*, 1996.

16. Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis, Summary for Policymakers*, February 2007.

17. Phase I ESA, Limited Phase II ESA, and Building Demolition Materials Assessment, prepared by TRC, March 18, 2011.

18. RBF Consulting, *Hydrology and Water Quality Technical Study*, June 13, 2011.

19. RBF Consulting, *Tentative Tract No. 17423 Project Traffic Impact Analysis*, dated July 8, 2011

20. South Coast Air Quality Management District, *CEQA Air Quality Handbook*, April 1993 (revised 1993).

21. South Coast Air Quality Management District, *Final Air Quality Management Plan for the South Coast Air Basin*, 2007.

22. United States Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990 to 2008*, April 2010.

23. United States Environmental Protection Agency, *High GWP Gases and Climate Change*, June 22, 2010.

24. United States Environmental Protection Agency, *Noise Effects Handbook – A Desk Reference to Health and Welfare Effects of Noise*, October 1979 (revised July 1981).

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